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ESSAY ON UNCONSCIOUS CEREBRATION!

Read to the Military Tract Medical Society.

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From the best information we have, the Pythagorians, some four hundred years before Christ, broached the theory that the earth moves.

Aristarchus, of Samos, a Grecian philosopher, is delivered down to us as the principal, *if not the first*, who maintained that the earth turns upon its center, and describes a circle around the sun. Such doctrines exposed Aristarchus to the severest censure of the sectaries of his time. Cleanthes, prominent among his enemies and calumniators, charged him with shaking, with rude impiety, the Throne of Vesta, who was worshipped as the patroness of fixed habitations and civilized life. Her sacred seat was represented to be near the center of the earth, and was declared to be always *fixed*, firm, and immovable. Whereupon, he was accused before the Court of Areopagus, of violating morality, and introducing innovation in religion. Just what punishment was inflicted upon him I have been unable to ascertain, though I have searched diligently through many ancient records, but that it was such as to make his name

infamous for many centuries, there is abundant evidence. By such unreasonable opposition, and such absurd objections, the the sublime philosophy of Aristarchus (the central theory of celestial science) was suppressed, and effectually held in abeyance for nearly nineteen hundred years, until the commencement of the sixteenth century, when Copernicus adopted and improved the hypothesis of the Pythagorians, which made the *sun* the center of the solar system, and the earth to move *not only* around the sun but around its own axis also; thus establishing the system of astronomy, which still goes by his name, and is, now, universally received as the true theory.

Apprehensions, arising from the novelty of his opinions, and also, doubtless, from the fate of Aristarchus, had, it is said, almost brought him to drop all thoughts of publishing his work, which had *lain* in his *escritoir*, not nine years *only*, which is the time Horace prescribes, but *nearly four times nine years*.

At length, however, its contents becoming known, and its merits canvassed and appreciated by a few of the more learned and intelligent, through the importunity of these, and his personal friends, he was, at last, prevailed upon to let it come out. But, *when* a copy of it was presented to him, *so great* was his *agitation*, in view of the *odium* certain to be cast upon him, and the relentless persecution with which he would be pursued, that he was *presently* seized with a violent effusion of blood, which put an end to his life on the 24th day of May, 1543.

Gallileo, nearly a century after, in 1612, observed some spots upon the *sun*, and, in his printed discovery of them, he ventured to reassert the truth of the Aristarchan or Copernican theory; and he brought forward several new arguments to confirm it. This startled the Jesuits, who, thereupon, procured a citation for him to appear before the *Holy Office* at *Rome*, in 1615, where he was charged with *heresy* for maintaining these two propositions, *viz.*: 1. That the sun is the center of the world (universe), and immovable by a local motion; and, 2. That the earth is not the center of the world (universe), nor immovable, but does actually move by a diurnal motion. The first of these propositions was declared to be *absurd*, false in

philosophy, and formally heretical, being contrary to the *express Word of God*. The second was also alleged to be philosophically false, and in a theological point of view, at least, erroneous in faith. "The Inquisition" pronounced sentence against him and his book. They obliged him to abjure his erroneous views, in the most solemn manner, committed him to the prison of their office during pleasure, which was until 1634, *nearly twenty years*, and his books were *gathered and burned at Rome*, and the *ashes scattered to the four winds of heaven*.

Notwithstanding this solemn abjuration, and the vigorous efforts of the *priesthood* to suppress his views, and keep the people in ignorance of them, the *arguments*, upon which his hypothesis *stood pillared*, became known, and those who were capable of judging soon saw that the evidences of their truth were such as to *command belief*. They saw that this theory explained many of the phenomena of the heavenly bodies, such as the seasons, eclipses, etc., which were quite inexplicable by the old Ptolemaic system, and that they addressed themselves so directly to the reason and judgment that they would be, *must be*, believed. Seeing and believing thus, they were encouraged to discuss these propositions among themselves, cautiously and prudently at first, but finally openly and boldly, till at length they were gradually accepted by the learned and more intelligent, and, finally, adopted as the basis upon which has since been erected the *solid and noble superstructure of modern astronomy*.

/ (When the superstitious world found that they were no longer able to gainsay or withstand the arguments advanced in support of these doctrines, and also foresaw in their general adoption, while they persisted in their hostile attitude, the certain destruction of their cherished systems of false religion, they immediately changed their tactics, dropped their hostile guise, and rapidly reconstructed their religious views, so as to make them harmonize with these stubborn facts.)

In a review of the history of science, in its progress up to its present status, one is struck with no little wonder, in tracing,

step by step, the advance of truth through the devious mazes of error, doubt, and prejudice, at the character of the opposition it has often met, and the great length of time this advance has been arrested and kept at a stand-still by the blind opposition and bigotry of those who should have been the first to herald its approach, and most eager to push it forward.

- 2 (It is, moreover, a matter of no little surprise to us, *now*, as we look back from our present stand-point over the past, to see how very nearly some of the early philosophers came to comprehending many of the fundamental principles of the various sciences, and we are animated with a feeling of *holy* indignation to observe how long these truths were obscured and held in check by suspicious and designing men.) It strikes one with wonder, also, now, to see the singular obtuseness of the masses oftentimes in apprehending the facts and arguments which it seems to us, should have been sufficient to arouse their minds to sensibility and investigation. But so it is, the progress of scientific truth was so often retarded by the sinister opposition of the suspicious and the absurd objections of the ignorant, that much valuable time, great patience, and extraordinary energy were required to overcome the obstacles constantly thrown in its path; and it was not until the great body of the people became so enlightened as to decide these questions for themselves, instead of looking to *priests* and *rulers*, that science has made any considerable progress among them.

Wm. Godfrey Leibnitz, baron of Leipsic, as long ago as 1685, in his *Protogea*, advanced the Igneous theory of geology, by which he explained the formation of the earth, and the subsequent changes of its crust, corresponding almost exactly with the one so generally adopted *now* by geologists under the name of Igneous Agency. This theory, so early enunciated, must have been still-born, for we hear nothing more of it until 1749, nearly a hundred years afterwards, when Buffon, the French naturalist, produced an elegantly written hypothesis upon the formation of the earth, based chiefly upon the views of Leibnitz.

- (These views, thus exhumed, gave great offence to the Faculty of Theology at Paris, and he was obliged, like Gallileo, to

recant opinions which are now maintained by all geologists. So the matter rested for almost another century. In the meantime "the world moved on." Investigations by scientific observers, in different parts of the world, were carefully made; facts bearing upon the subject were accumulated in great numbers, until, by careful comparison, free and thorough discussion, sufficient data were procured to enable the truth of the Igneous theory to be made out.

But the pseudo-religionists, *now* as in the former case, when they found that they were no longer able to meet the arguments in support of geology, nor make any effectual stand against the progress of these scientific truths, and, moreover, when they saw the ground upon which they stood fast giving away beneath their feet, and their whole structure of false philosophy *tottering, then*, very reluctantly, made a virtue of necessity, and did as their predecessors had done before, in regard to the Copernican system of astronomy, ceased their blind opposition, and again reconstructed their religious theories in accordance with the inexorable logic of events, and made them harmonize with those inflexible facts they could no longer successfully controvert.

The learned mathematician Leibnitz, in 1685, also advanced the startling doctrine of "Unconscious Cerebration." This announcement was, it seems, still more unfortunate than his new doctrine of geology. Nothing was said, and very little known, about it after its declaration, until some twenty years ago, when Dr. Carpenter, without knowing that he had been preceded, advanced the theory of Unconscious Cerebration to account for some anomalies of mental action. After satisfying himself in regard to the probable truth of the theory, he submitted his views to two of the profoundest thinkers of the age, Sir Wm. Hamilton and Mr. John Stuart Mill. From the former he learned that the same doctrine had been advanced some two hundred years before, by Leibnitz. By the latter, he was assured that the unconscious development of a subject of thought was so familiar to him, that, when he found it difficult to pursue an inquiry further, not seeing his way clearly through

its entanglements, he was accustomed to lay it aside for weeks, or even months, and to devote himself to other objects, with the full expectation of being able to pursue his first investigations with diminished difficulty whenever he resumed it. Notwithstanding this high authority, this doctrine has made very little progress in the minds of the learned psychologists of the day. Perhaps *the great reason* why this doctrine has not been accepted by the scientific world arises from the indisposition to regard *mind* in connection with *organization*, *from the fear* of favoring the *opinion* that *mind results therefrom*.

Moreover, many are probably deterred from investigating this subject as they might, from the jealous fear always actuating the opposers of science, of finding something that will disturb the established dogmas of the day. But as honest searchers after truth, we should not shun a careful investigation of so important a matter, nor should we allow our previous opinions or prejudices to forestall our judgment, or divert the current of our thoughts from tending whithersoever the evidence may carry them. If we do this, I apprehend we shall find that *mind* which, at a first view, at times, appears so absent and so abnormal is, in reality, *after all*, no exception to all other phenomena in nature. (The more we study this subject unbiassedly, I think, the more certainly will we be led to the conclusion that the mind is as much under the presidency of law as any other function of the body. Every thought, every impulse, and every proclivity is but the legitimate result of a definite cause, and these causes follow each other, and their antecedent causes, with as much regularity, precision, and certainty, as any such necessity in the physical world. There are subtle laws pervading every department of mental activity—running through and through all the avenues of the mind, conscience, reason, judgment, and the affections which control, direct, regulate, and moderate or intensify all our schemes, speculations, and determinations. From these all-permeating, yet unseen, laws, result all our confidence in the virtue and fidelity of our fellow men. From these latent forces arise all the exalted aims, the noble and sublime achievements of the

great and the good as well as the low and the bad. Upon them rest all our attachments, affinities, and cherished relations of mind with mind. The mental *eye* looks out into the world, around, through these variously colored media, as a kind of kaleidoscope which may, by reflection, refraction, transposition, or polarization, magnify or diminish the objects and views, giving light and shade, tint and color, with as much responsiveness to law, with as much certainty and regularity as any phenomena of light and optics in natural philosophy.)

As the natural eye, in looking through an uneven pane of glass, will see objects distorted and comic, so will impressions upon the *cerebrum* so modify its nutrition, by some delicate and peculiar molecular change therein, as to change the whole mental character, by *intensifying a certain class of impressions* upon the consciousness of the individual, to the *exclusion of others*. Hence, we have mental as well as optical illusions; objects partly-colored and distorted, magnified or diminished, so as to control opinions, produce unnatural attachments, sharpen censures, or infuse unwonted severity into penalties and judgments.

The cerebrum in man, therefore, is a wonderful instrument of capabilities, caprices, and powers. It is owing to the much larger development of this part of the brain over the lower animals that gives to *man* his preëminence over all other orders and species of the animal kingdom. By reference to comparative anatomy, it will be found that the relative *proportion of this organ* diminishes as we descend from the higher mammalia to the lower, from them to the birds, from thence to the reptiles, and from these again to the fishes.

The brain is placed in relation with the outside world through the senses. The various sensory impressions are thence conveyed, through their respective and appropriate nervous filaments, to the sensorium, located in the sensory ganglia. Under the term sensory ganglia, may be included that assemblage of ganglionic masses lying along the base of skull in man, and partly included in the medulla oblongata, in which the special senses, seeing, hearing, feeling, tasting, and smelling, have their central terminations.

It seems to be a peculiar arrangement of the nervous apparatus, that excitor impressions should travel upwards, if they meet with no interruption, until they arrive at the cerebrum. When they reach the sensorium, they make an impression on the *consciousness* of the individual, and thus give rise to a sensation; and the molecular change, thus induced, being further propagated from the sensory ganglia to the cerebrum by reflex action, becomes the occasion of the formation of an *idea*. If, with this idea, any pleasurable or painful feeling is associated, it is *called* an *emotion*, and, either as a simple or emotional idea, it becomes the subject of intellectual operations, whose final issue may be a volitional determination which may be exerted in checking or producing muscular motion, or in controlling or directing, to some extent, the current of thought.

On the reception of sensory impressions the changes which they produce in the sensory ganglia give rise to a new excitement of nerve force, which is propagated along the *ascending fibers* to the *vesicular matter* that forms the *surface* of the cerebral hemisphere; and *it is not* till they arrive at the *ulterior termination* of these *fibers* that their *impressions produce* those *changes* which are *instrumental* in the *formation* of *IDEAS*, and subsequently in the *higher and more complicated intellectual operations*. These intellectual operations, *themselves now*, become the source of new changes in the condition of the vesicular matter of the nervous substance, and an excitation of nerve force takes place *here* as their result, which, transmitted downwards to the sensorium, gives rise, through it, to appropriate respondent movements. The *sensory ganglia*, therefore, let it be remarked, constitute the *seat* of *all consciousness*, *not only* for *impressions* on the *organs of sense*, but *also* for *changes* in the *cortical substance* of the *cerebrum*. So that, it is not until these changes have reacted downwards upon the sensorium that we have any knowledge or consciousness of the formation of ideas, or of any intellectual processes which may be going on there. The cerebrum, therefore, on the receipt of impressions, reflected from the sensorium, immediately commences the operation of working up the materials submitted to it. This process

may continue unconsciously to us, unless interrupted by new impressions, in which case the former process seems to be temporarily arrested, until the import of the new intelligence is fully made out, when the *cerebration* is resumed, with such modifications as the new information may seem to require, or pursued after the tenor of the former train. Hence, we often see a *trivial incident*, seen perhaps a thousand times before, without making any notable change in the current of thought, produce the most striking, unlooked for, and important results. An intercurrent thought thus striking the mind at a particular juncture, incidentally, while it is in a peculiarly excited state of inquiry, when the cerebrum seems to be casting about for more facts, and the thoughts break loose, as it were, from former combinations, reaching and *feeling out around* for more materials; *it is at such a time that some mere trifle, some apparently insignificant circumstance, will wholly change the current of thought, and divert it into a fruitful field of important discovery.*

Sir Isaac Newton had, doubtless, seen apples fall a hundred times before, but as his mind was not in this "*statu-nascente*" condition, no important results followed. But *now*, when his mind was on the *qui vive* for new truths, new facts, to bring to the test certain theories evolved from previously received data, *then it was* that this little incident, the most trivial in nature, coming in just at the right time, and springing a felicitous train of thought, gave such a new direction to his investigations as, followed up to their legitimate conclusions, resulted in the *most stupendous discovery of any age*. Newton made this discovery, not because he *willed* it, but because he could *not help it*. It was, in a very important sense, an unavoidable result, the evitable evolution of his philosophic brain. The office of the organs of sense *is simply* to supply the crude materials, while it is the province of the cerebrum to receive and work up those materials, solve the problems, and transmit the results down to the sensorium, from whence they are utilized in the practical voluntary affairs of life.

The cerebrum may not inaptly be compared to a jury, while

the organs of *sense* may represent the *witnesses*. The jury, after hearing the evidence, retire to a private room, where, by themselves alone, they compare notes, weigh the evidence, and finally work up the case into a verdict. So it is with the cerebrum. She takes particular *note* of all impressions transmitted to her from the organs of sense, and having thus supplied herself with all the evidence she can obtain, she modestly retires to the secret chamber of unconsciousness, where, by a thorough process of careful comparison, sifting, weighing, and discrimination, a *decision* is *reached*, or, in case of no decision, which sometimes happens, then, in this event, either the judgment is suspended for further testimony, or the *jury hangs*—when the matter is indefinitely postponed. It may be remarked, that, with the great majority of mankind, on some of the most important questions of practical utility and philosophic interest, either there has been a premature decision, or the *jury has hung*.

There is much ground for the *belief* that every sensory impression which has once been recognized by the perception, is registered (as it were) in the *cerebrum*, and may be reproduced at some subsequent time, although there may be no consciousness of its existence in the mind during a long intermediate period. Instances are of frequent occurrence in which ideas come up before the mind during delirium or dreaming, and are expressed at the time, although the individual may not be able to remember ever to have heard them before, they yet having been proved to have been heard at some long antecedent period. Dr. Carpenter relates the case of a lady during a delirium of fever who continually repeated sentences of Hebrew and Chaldaic, of which she stated herself, on recovery, to be perfectly ignorant; but on tracing her former history it was ascertained that, in early life, she had lived, as servant maid, with a clergyman who used to walk up and down the hall of his dwelling repeating aloud these passages, which she must have retained in her memory unconsciously to herself.

While preparing this essay I was requested by Dr. Anthony to visit his father-in-law, who was then lying very sick. This

gentleman was between seventy and eighty years old. In relating the history of the case, the Doctor said that his mind had been failing for several months. Among the first signs of mental aberration they noticed that he talked about, and manifested great anxiety in regard to, the *cattle* and *sheep* on the farm (by which I knew at once that he had been a farmer), which, he said, were not properly cared for. He had not lived on a farm, nor had anything to do with one for many years. He often inquired about his children, how they were to be supported and educated, though they were all quite grown up, and well settled in life. It is noteworthy that these were the very subjects that occupied his mind some thirty years before. He imagined, also, that he had to take the care of, and support, a colored woman and three small children, which gave him great concern. He talked much about their destitute condition, and repeatedly urged that they should be immediately attended to. When I inquired whether he had ever in his former life had destitute colored neighbors appealing to him for assistance, I was answered, "No, but that he used to be an ardent Abolitionist, and always manifested great sympathy for the colored race in a state of slavery." Here, then, you see we have another striking instance of a long-registered impression spontaneously reproduced, after the lapse of some thirty years, during the general wreck of the mental faculties.

Of the precise nature of the changes by which sensory impressions are thus preserved, we are, in the present state of psychological science, entirely ignorant, but it must be somehow intimately connected and interwoven with the nutrition of the cerebrum, since we do know that alterations in that structure have a marked effect upon the memory.

It is no very uncommon thing for a person to dream the *same thing* over the *second time*, or in a *second dream* to *renew* a former train of thought, taking up the thread just where it was left off in a prior dream. Indeed, some of the most complicated problems in mathematics have been solved during sleep, which had puzzled the brain for hours previously. The process of solution of a difficult problem, interrupted, unfinished, or left

because the person could not see his way through it clearly, has been resumed and completed during sleep, by the student rising at night, in a state of somnambulism, and committing it to writing, and the person again retiring to bed. In the morning the student was greatly surprised to see the problem wrought out, *in extenso*, in his own handwriting. So well understood is this matter of unconscious cerebral activity that many persons, when they have a tedious and difficult question to solve, which they cannot readily do, they choose rather to leave it to be wrought out in this way, feeling confident, from past experience, that it will be done. Even the aborigines of our country seem to have some knowledge of this anomaly of mental action, for it is said that they make it a point never to decide a weighty and important matter until they have deliberated well and slept upon it.

It is, in fact, the province of the cerebrum *to think*, as much as it is the office of the lungs to decarbonize and oxygenize the blood, or the stomach to digest food, or the liver to secrete bile. These functions are all carried on in much the same way, under one uniform law of cell-action. Neither one of these functions is entirely under the control of the *will*. All are more or less involuntary. The healthy brain, supplied with suitable materials and conditions, *will think*—think automatically and continually, whether we *will* it or not. We may, it is true, by an arbitrary exercise of the will, modify and control the *current* of our *thoughts*, and educate the mind to certain methods and modes of thinking, until, by long discipline in the habit of close, careful, consecutive thinking, we may acquire great power of reason, and may thus accomplish astonishing results, but *after all this is admitted, it is only when we intentionally divert the current of our thoughts from the channel in which they were running, when we determine to put our mind in operation in some particular way or manner different from what it is acting, that we can be said to use the will in the act of reasoning; and this arbitrary exercise of it I believe to be much more rare than is generally supposed. Hence, then, we seem justified in affirming that the cerebrum may, and very*

often does, act upon impressions transmitted to it, and may and does actually elaborate results, such as might have been attained by a volitional direction of our minds to the same subjects without any *consciousness* on our part. The experience of most men will readily furnish numerous instances of this kind of cerebral activity.

As the *spinal axis never sleeps*, but, by its constant diffusion of nervous energy, keeps up throughout the body that persistent, tireless state of muscular *tension*, so necessary to the support of the framework and the internal viscera, so do we believe that the cerebrum is constantly acting its part, continually evolving thought so long as the vital forces, the vaso-motor and cell-action continue. If the circumstances connected with the thoughts are such as to favor their reaction downwards upon the sensorium, we are *then* made conscious of them, otherwise we are not. When the avenues, the organs of sense, are closed, or the susceptibility of the sensorium to external impressions is temporarily, and more or less completely, suspended, as in profound sleep, or when its functions are held in abeyance, by the preoccupation and concentration of the mind upon one subject in which its whole faculties are engrossed, the cerebrum *then also* acts unconsciously to us. The *mode* and *character* of the *thoughts* are, therefore, in a great measure, the consequence of the reaction of the cerebrum upon the circumstances which call it into play. While the cerebral, like all other functions of the body, is subject to periods of greater activity and partial repose, it by no means follows that there is at any time a total cessation from all activity in the case of the cerebrum any more than the spinal axis.

Intellectual labor is always, sooner or later, attended with a sense of fatigue, and is also accompanied with cell-metamorphosis, common to all other structures and physical exercises. The products of the disintegration of the brain are always found in the excretions of the body after severe mental labor.

In the delirious ravings of intoxication and of fever, or the perverted reason of the lunatic, we have the same evidence of cell-change that we do in the sayings and doings of the same

individuals in a state of health, or normal condition; and I have often thought there is a striking analogy between tissue formation and ideation.

The primary fundamental principle of all organized structures is cellulation. In the normal state these cells are of a determinate character, and a particular kind. The cells are regular and uniform, and the process of cellulation proceeds after a particular type, and goes through the necessary changes successively until they arrive at their ulterior destiny of healthy structure. But in disease, as in cancer, for example, the cells are quite irregular, caudate, fusiform, seniform, spindle-shaped, etc., while they possess increased formative activity. There seems to be an effort to produce healthy tissue, but the action is modified by occult intercurrent causes so that no healthy structure is formed. So it is in delirium and insanity, we have cerebration disordered, visions distorted, conceptions abnormal, sights unusual, figures fantastic, but it is evident that there is a disposition all the time to ideation more or less correct and coherent.

Prof. G. B. Wood, of Philadelphia, once attended a portrait painter through a period of delirium tremens, who, on recovery, in compliance with the Doctor's request, executed a beautiful painting, in which he exhibited, on canvas, the figures and images so indelibly impressed on his memory during his illness. There was one striking peculiarity of this painting. It was this: While part of almost every figure was natural and correct, other parts were as invariably distorted, unnatural, and fantastic; as, a man with the head of a horse, a dog with one side of his head swelled out into irregular and huge proportions, and altogether abnormal; or some *fantastic appendage to a natural figure*. Dr. Wood, when he came to his lecture on Delirium Tremens in his course, used always to *present this picture to his class*, and I was told that he prized that picture more than any other in his *museum*. To the psychologist it was, indeed, a very interesting painting. So it is, then, to use a strong synecdoche, a *thought* is but the *bursting of a cerebral cell*! As muscular contraction is effected by the rapid ruptur-

ing and reformation of sarcoous cells by *nerve force*; so is idea-
tion and ratiocination but the result of the moulting and
regeneration of cerebral cells, under the influence of nerve
force; or, as the muscles are the instruments for the correla-
tion of nerve force into mechanical power, so is the cerebrum
the substratum or instrument through which nerve force is con-
verted into mind. If the brain be healthy and the blood pure,
and the circumstances surrounding, and calling it into action,
normal, the mental imagery will be perfect, and the *idea* will
come forth *full, plump, and round*, like a *precious coin struck*
from the *mint*, and will pass current in the world of thought.
But if the brain be diseased, or the mental stimulus, the blood,
be loaded with noxious and poisonous matters, *then*, the cere-
bration will surely be abnormal.

If it be objected that we cannot understand just how nerve
force is converted into mind, we might reply, that, neither do
we yet quite understand just how *any one* of the physical forces
is metamorphosed into *another*. The *modus operandi* of the
conversion of electricity into magnetism, and nerve force into
mechanical power, is just as mysterious and incomprehensible
as the merging of nerve force into mind. So it is, also, with
the other forms in which force manifests itself. We are able,
however, to discover the apparent annihilation of the *one*, and,
by careful observation, we have been able to estimate before-
hand the absolute equivalent of the other.

When we have learned more about the dynamics of the
nervous system we shall be better able to understand and ex-
plain what now appears obscure. If the objector will please to
explain the *modus operandi* of the conversion of *nerve force* in
the *inferior animals* into INSTINCT or *brute mind*, then, I will,
by the same parity of reasoning, explain the *correlation* of
nerve force into *mind force* in MAN. The *instinct-mind* and
sagacity of the *brute* differ from the *mental faculties* in *man* in
NO OTHER respect than that of *degree*. The cerebral organs
adapted to *similar functions* are singularly *analogous* in *them all*.
When we fully understand the *one*, we shall have a *sure* key to
the explanation of the other. It is as unnecessary to call in

the aid of a "*Deus ex machina*" to help to explain the phenomenon in the *one case* as the *other*. The forces of mind, and the elements of matter, are, in both cases, taken from the *universe with life*, and *restored* to it at *death*. Life and death are antithetic, and *exactly opposite terms*. Life kindles our faculties into conscious existence, and death destroys what life enkindles, so that death must place us back "*statu quo ante vivum*." As we can trace our identity no further back than the commencement of organic life, so does it follow, logically, inevitably, that we will not be able to trace it forward into the future further than death. The idea that man may retain the power of thought after the destruction of the brain, is too absurd to bear the test of careful scrutiny. It is unphilosophical, and contrary to all analogy. It is a figment of the imagination, and a relic of barbarism and superstition.

It is an interesting fact, and one that has much bearing on involuntary cerebration, that some of the most celebrated men for intellectual and artistic ability, have been *mere imbeciles* on all other subjects except those in which they thus excelled. Dr. Carpenter gives two cases, in which the mental action which evolved the result, seems to have been of an automatic character. All accounts of Coleridge's habits of thought, as manifested in his conversation (which was a sort of thinking aloud), agree in showing that his train of mental operation, once started, went on of itself, sometimes in the original direction for a long distance, sometimes with a divergence into some other track, according to the suggestions of others, or circumstances. His whole course of life was one continued proof of the weakness of his will; for, with numerous gigantic projects continually in his mind, he could never bring himself seriously to attempt any one of them; and his utter deficiency in self-control rendered it necessary for his welfare that he should yield himself to the control of others.

The composition of the poetic fragment "*Kubla Khan*" in his sleep, is a typical example of automatic mental action; and almost his whole life might be regarded as a sort of waking dream, in regard to the deficiency of that self-determining

power which is the preëminent characteristic of every really great mind.

The whole artistic life of Mozart, from his infancy to his death, may be cited as an example of that spontaneous or automatic development of musical ideas, which expressed themselves in the language appropriate to them. When only four years old he began to write music, which was found to be in strict accordance with the rules of composition, although he had never received any instruction in them. And when engaged, in adult life, in the production of those works which have rendered his name immortal, it was enough for him once to fix his thoughts in the first instance upon the subject (the libretto of an opera, for example, or the words of a religious service), so as to give them the requisite start or direction, and *then* they flowed onwards without any effort of his own, so that the whole of a symphony, or an overture, would be developed in his mind, its separate instrumental parts taking their respective shapes without any intentional elaboration. In fact, the only exercise of the will that seemed to be required on his part, consisted in noting down the composition when complete. It is recorded of him, that, being once asked by an inferior musician how he set to work to compose a symphony, he replied, "If you once think how you are to do it, you will never write anything worth hearing. I write because I cannot help it." Mozart, like Coleridge, was a man of extremely weak *will*. He could neither keep firm to a resolution, nor resist temptation, and, when not under the guidance of his excellent wife, was the sport of almost every kind of *impulse*. But there probably never was a more remarkable example than his musical career presents, of the automatic operation of that creative power which specially constitutes genius, and his life is altogether a most interesting study to the psychologist.

But there is an instance of a somewhat similar kind, later, and in our own country. You have all doubtless heard of "Blind Tom," the negro boy, who is an *idiot* on all subjects but music. He, however, possesses extraordinary powers of mind on this *one* subject. He can execute the most difficult

and complicated pieces of music after hearing them *but once*. It is claimed that he does this from memory, and his inherent and intuitive sense of the beautiful and appropriate in music. I am indebted for the following facts to Mr. G. Gilbert Gibbons, Esq., of Princeton, who, in his able argument in defence of John Card, being tried for the murder of his wife, stated, that, at one time, while in Chicago, he attended a public exhibition given principally for the purpose of testing the musical powers of the negro boy "Blind Tom." Baumbach, the pianist and composer, played, for the first time, one of his most difficult and lengthy pieces. "Blind Tom," on being brought into the room, as soon as the music began, commenced and continued whirling rapidly around on one foot, until the music ceased, when, to the astonishment of all present, he seated himself at the piano, and, not only played the piece through without making any mistakes, but according to Baumbach's own admission, and the universal opinion of the audience after the performance, he actually improved upon the author himself, in purity of tone, accuracy, delicacy, and celerity of touch, and felicity of expression. Many such examples, doubtless, might be given to show that the cerebrum has a way of its own of doing business independent of the will.

The molecular changes constantly going on in the cerebrum as inevitably produce thought as the same molecular changes in the spinal axis produce nerve force, or the cell-action in the liver produces bile, or the same action in the glands produces the various secretions of the body. The difference in the result is owing *alone* to the difference in structure and the circumstances. In each case there is a special structure adapted to the performance of a special function. Nerve force is correlative mind force, vital force, electric force, etc. In fact, it may be declared that there is *but one force* in nature, and that force is *always acting in some way or other*; and, moreover, is *not subject to either increment or diminution*. Matter and force, therefore, are eternal and forever the same in amount. One is as equally indestructible as the other. It follows, therefore, that, when one form of this ever-changing force is metamor-

phosed into some other equivalent force, and, hence, seems to be annihilated, it is in reality *only acting* in some other way—appearing in some other form. Force can neither originate, *de novo*, nor cease to operate in some of its protean forms. Thus, when motion is retarded by friction, *heat* is generated. If the rubbing surfaces are heterogeneous, electricity, as well as heat, is the result.

The fact that one force can, *at will*, be transformed into another, and the equivalent of the new force be determined beforehand with mathematical certainty, marks an era in Physics, Physiology, and Psychology.

Prof. Samuel Jackson's discovery of the correlation of forces, and Schwann's discovery of the animal (I might say the universal organic) cell, are destined to effect as great a revolution in physiology and psychology as the theory of Aristarchus and Copernicus did in astronomy, or that of Leibnitz and Hutton did in geology. "Verily, the world moves."

Planting our feet firmly upon these "look-out mountains" of physical science, as we survey, from this new vantage-ground, the more airy regions of psychology, we may smile at the impotent assaults of, and bid defiance to, our *old enemies*; while they, perhaps, recovering from their temporary dismay and discomfiture, rallying once more in defence of their long-cherished dogmas, marshalling again their scattered hosts for the final *onset*, we expect to see thousands of untried steel leap forth from rusty scabbards in the defence of *truth*, and, by the collision of opposing weapons, *one resplendent blaze of intellectual light* and *moral grandeur* shall be *enkindled*, waxing brighter and brighter, until every species of vice and error shall be dispersed by the *irradiating* beams of truth and reason. Then shall the disciples of a *vague* and illusive religion, the victims of error and superstition, and the votaries of Transcendentalism and Empiricism, catching a glimpse of their own *mental obliquity*, startled by a *view* of their own *perverseness*, rush with horror from the ghastly monsters they have been so long straining to their bosoms; *recoiling*, catch the inspiration of the age, vitalized and electrified into a new existence, still

Steady But They

again readjust and reconstruct their falling systems and visionary theories, so as to make them *harmonize* with the inexorable logic of these scientific discoveries and a rational philosophy, and be constrained to acknowledge that "*the world moves.*"

ARTICLE XXVIII.

IMPROVED FORM OF THE ENDOSCOPE.

By E. ANDREWS, M.D., Prof. of Principles and Practice of Surgery,
Chicago Medical College.

[Read to the Illinois State Medical Society, May 20, 1868.]

The object of the endoscope is the examination of cavities of the body not accessible to ordinary vision. The form best known in this country is the one invented by Desormeaux, of Paris. It consists essentially of three parts, *viz.*: the lantern, the perforated mirror, and the tube. The lantern is an enclosed lamp, filled with burning fluid, having on one side a concave reflector (R Fig. 4), whose function is to send back the rays which fall upon it, so as to increase the light thrown in the opposite direction. The light, thus re-enforced, falls upon a lens (L, Fig. 4), which condenses it upon the perforated plane mirror (M, Fig. 4). The latter being set at an angle of forty-five degrees, throws the light in a condensed beam into the tube (C, Fig. 4), and strongly illuminates the interior of any cavity into which the tube is inserted, rendering it visible to the eye placed at E, Fig. 4, where it looks through the perforation of the mirror directly into the tube.

The principle is plain, but the practical difficulty is, that unless the apparatus be in perfect order, the light fails to reach the bottom of such a deep, narrow tube in sufficient strength to illuminate and render visible the membranes at its extremity. So great is this difficulty that I apprehend that the instrument, in the form devised by the European inventors, will never come into extensive practical use. In order to overcome this evil, and produce an instrument which will display its objects when

under such management as it would be likely to get in ordinary hands, it is necessary to have a more intense light than can be obtained by any common lamp. I have, therefore, devised an apparatus for burning a magnesium wire in the flame of the lamp, which gives an illumination of such intensity that it can only be compared to the blaze of the noonday sun. This attachment is very simple, and is represented in the sectional view, Fig. 3, in which L is the lamp, and F the flame. S is a revolving metallic spool, on which the wire is wound; and P represents an inclined plane, along which the wire passes. Through an opening in the side of the lantern the wire enters the tube T, which conducts it to the flame of the lamp. If, now, the thumb be pressed upon the inclined plane, and then moved upward, it will slide the wire forward, and cause it to enter the flame, where it burns with a brilliancy far superior to that of the best lamp. I at first intended to have the wire advanced to the flame by means of springs and wheels, but a little experimentation convinced me that this would complicate the apparatus too much, and that it was better to simply slide forward the wire by the pressure of the thumb. The spool itself may be dispensed with, without inconvenience, the observer simply taking a piece of the wire and inserting it without winding it upon anything.

The endoscope is adapted to the inspection of all deep cavities and mucous passages into which a straight tube may be passed. It may be used for examining the ear, the rectum, and the bladder, as well as the interior of abscesses. It may be passed into the track of bullet wounds, to distinguish broken bones from impacted balls, and to detect pieces of cloth and other foreign bodies. It has been even inserted through punctures into ovarian tumors, to examine their interior. Calculi in the bladder have also been detected by it. Its principal practical use, however, is the examination of the interior of the urethra, as a means of diagnosing its different diseases, and of ascertaining the progress of the cure.

In order to understand its usefulness for this purpose, a few remarks on the pathology of the urethra are necessary. The

healthy urethra is lined with a smooth membrane, of a light pink hue, like that of most other mucous canals. When collapsed, its walls fall together in five or six longitudinal folds, so that, seen through the endoscope, the folds, prolapsed over the end of the tube, present a radiated form, as shown in Figs. 1 and 2. If the membrane be inflamed or congested, it presents a deeper red; and if anæmic, it is seen to be abnormally pale. The most important revelation of the endoscope is the complete establishment of the fact that the mucous membrane of the urethra, like the conjunctiva oculi, is subject to a granular inflammation, and that this disease constitutes the true lesion in many chronic gonorrhœas. Some years ago this idea was broached in Europe, and experiments were made on abandoned women, hired for that purpose, which showed that granular ophthalmia might be inoculated into the urethra, and there produce a perfectly similar disease, which could not be distinguished from chronic gonorrhœa. The want of a proper instrument for inspection, however, rendered the demonstration rather difficult and unsatisfactory, and this important discovery fell into obscurity. Desormeaux's instrument has brought this fact again into notice, and given good reasons to believe in the following propositions:

1. True chronic gonorrhœa, is a granular inflammation, identical in nature with the granular inflammations of the eyelids, of the cervix uteri and of the larynx; and one may be produced from the other by inoculation.

2. When this disease exists, it has no tendency to spontaneous recovery, but will last indefinite years unless treated, and will communicate contagion as long as it continues.

This disease often persists long after the patient believes himself or herself free from the clap, and hence the frequency with which men contract gonorrhœa from females whom they believe, and who believe themselves, to be free from disease.

The chief use of the endoscope is the diagnosis and treatment of this disease. In order to employ it to advantage, a variety of tubes are required, but the smallest should at least equal a No. 10 catheter. The tube is first detached from the lamp,

oiled, and a core is placed in it, which projects in a rounded extremity beyond the tip, to facilitate the entrance. If the urethra is too contracted, it must first be dilated. The tube should be passed pretty nearly to the prostate gland, when the core is withdrawn and a pledget of cotton pushed through it into the urethra beyond, to prevent the flow of mucus or other fluids into the tube. This pledget may be left there, to be expelled by the next passage of urine. Attaching the lamp, and applying the eye to the instrument, the tube should be gradually withdrawn, so that every part of the canal successively prolapses over the extremity of the tube. At the same time the magnesium wire is kept burning, and thus the whole interior of the urethra is inspected. The appearance of the granular disease thus seen is represented in Fig. 2; while the healthy urethra is represented by Fig. 1.

The applications to be used here are precisely those found most useful in granular conjunctivitis, *viz.*, nitrate of silver, sulphate of copper, tannin, alum, acetate of lead, subnitrate of bismuth, carbolic acid, etc. An injection of one part of carbolic acid, dissolved in three parts of linseed oil, frequently has a powerful effect in arresting the suppurative discharge, though it is rather severe treatment. In Paris, at the present time, great advantage is claimed for the use of powders blown in through the tube and dusting the interior of the urethra. In my own practice, I commonly carry in the powders on a pledget of cotton wound on the end of a wire. For this purpose, nitrate of silver, sulphate of copper, and various other medicaments, may be finely pulverized, along with subnitrate of bismuth, using a greater or lesser proportion, according to the strength required.

Granular inflammation of the urethra, like the same disease on the eyelids and in the cervix uteri, is extremely slow and obstinate—several months, and often a year or more, being consumed in the cure. As long as the endoscope shows any of the granulations remaining, so long the disease exists, and its contagiousness continues. During all this time the discharge may be scarcely worthy of notice, and not at all purulent, but a

slight irritation serves to rouse the granulations into activity, so that the patient, without being subjected to any new contagion, may have all the symptoms of a new attack of acute gonorrhœa. Chronic urethritis and metritis, like granular conjunctivitis, may be communicated in a quiescent form, the granulations springing up gradually, accompanied by a slight irritation, without the patient ever passing through the symptoms of ordinary acute clap. Hence, many persons will give gonorrhœa to others who are utterly unaware that they have ever had the disease themselves. This is one reason why the weekly medical examinations of strumpets, under the license systems of France and Prussia, have proved so worthless for restraining the spread of venereal disease. The quiescent form of the disease escapes the notice of the examiner, who never looks for granulations, but only for the more noticeable phenomena of ordinary gonorrhœa and syphilis. Hence, a large portion of the prostitutes, who weekly receive their certificate of health, are really diseased, and become chronic centres of contagion, as many a verdant Englishman and American has found out to his cost, who, trusting to the fancied security of the governmental inspections, has indulged in Parisian licentiousness.

I stated above that granular urethritis has scarcely any tendency to spontaneous cure. I have seen cases of 20 years' standing which were still in full activity. There is, however, at length, a sort of natural termination, which is reached by some patients in a few years, but by others not in a lifetime. The tendency of the granular disease is to gradually infiltrate the mucous membrane with permanently organized plastic lymph. This, like all other new tissue, undergoes contraction, which gradually compresses the contained bloodvessels, and at length obliterates them to such an extent as to atrophy and destroy the granulations themselves. The mucous membrane is now found to be paler than is natural, and to be hard and gristly, like the tissue of a cicatrix. The contractile tendency here is doubtless the same which we see in granulation of the eyelids, where it produces similar results; and, in addition, by

diminishing the area of the conjunctive, draws in the edges of the lids until the ciliæ rub on the eye. Hence why entropium so often follows granular conjunctivitis. A perfectly analogous phenomenon is observed in granular urethritis. In every case, according to Desormeaux, there is present some contraction of the calibre of the urethra, which, even when slight, may be detected by a practised hand in introducing a sound, and in more aggravated cases constitutes stricture. Hence, the opinion that this trouble is usually due either to the acuteness of the first inflammation, or to the injudicious use of nitrate of silver by the surgeon, must be considered erroneous. Granular urethritis tends towards stricture in all cases, though the narrowing is not always great enough to trouble the patient in urination. The same contraction, when it is considerable in amount, shortens the urethra so much as to be an obstacle to erection, constituting the chronic form of chordee.

The granular disease, situated in the cervix uteri, is probably the cause of the well-known barrenness of strumpets, and of women whose husbands have been of loose habits. In the latter case, the woman produces perhaps one or two children, but by this time gets from her husband a granular metritis, which obstructs the os uteri, and effectually prevents further conceptions. It is in this way that licentiousness operates to restrict the growth of population, and correspondingly diminishes the progress and power of nations.

In conclusion, I would state, that I think the endoscope is a valuable addition to our resources in urethral diseases; but that examinations, by means of it, into the interior of the bladder, the cavities of tumors, and the tracks of fistulas, will be found rather matters of curiosity than of usefulness. I think, also, that in consequence of the dimming of the reflectors, by time and other deteriorations, it will only be satisfactory in ordinary hands when used with the addition of the magnesian light.

ARTICLE XXIX.

MODERN HOMŒOPATHY.

COMMUNICATED.

From the *London Monthly Homœopathic Review*, for June, 1868, we learn that Lord Ebury gave vent to a feeling of regret that the Report of the London Homœopathic Hospital did not contain evidence of a greater development of the objects of the Institution. The number of patients was not very large, and the clinical lectures had been given up, "owing to the attendance being so scanty as greatly to discourage the lecturers."

We also find that the fourth object of the founders of the Hospital was, not is, "to let inquirers see of what homœopathic treatment consists, and *wherein it differs from other methods of cure.*" But the position is now assumed, that "when a physician adopts homœopathy he does not bind himself to use medicines on no other principle. His first and chiefest obligation is to the patient." His second duty only is due to homœopathy, for he must do the best within his knowledge for the promotion of his patients' recovery or relief. "When a case, or part of a case, is without the sphere of the homœopathic law; in other cases where his knowledge of the practice fails him; and, again, where a suitable palliative appears to be demanded, he is bound to use other than homœopathic means. This is always required in private practice," and is carried out in the London Homœopathic Hospital, although "a plan of treatment partly homœopathic and partly something else; one, in which one patient is treated in accordance with the law of similars, and another only partially so"—will fail in securing no less than four out of the five objects, to achieve which the Hospital was founded, *viz.*: to obtain statistics by which the success of homœopathic treatment *may* be compared with other methods of cure; to demonstrate the success of pure homœopathic treatment; to teach the system in all its purity, etc., etc. All these great objects are subservient to the interests of the sick, for the editor says:—

"We all know and admit that there are cases in which the most conscientious and painstaking (homœopathic) practitioners feel compelled to fall back upon auxiliary (allopathic) aids to eke out a modicum of relief, or indeed to assist in curing."

Accordingly, in the London Homœopathic Hospital, in which the cases "are not of so serious a character as one is accustomed to see under treatment in hospital," black wash is applied to syphilitic sores, and $\frac{1}{2}$ -grain doses of mercury given internally. Cases of glandular enlargement in the neck were treated with tincture of iodine, painted on externally. For cases of continued sleeplessness $\frac{1}{16}$ of a grain of acetate of morphia was given every 15 minutes.

The Hospital physicians repudiated, one and all, the fallacies and absurdities of Hahnemann about infinitesimal doses and dilutions. They quietly told an inquiring physician "that the doses were not a part of *their* system; that like cures like was all *their* creed;" although it is not a matter of general or partial belief that morphia keeps people awake; that iodine produces enlargement of the glands; and black wash produces syphilis.

These Hospital physicians, and many others, have at last returned to the use of the medicines of the rational school in appreciable quantities; and the editor says the treatment in the above cases "was far too like allopathy to be advisable in a homœopathic hospital," although, "so long as the doses of mercury did not induce mercurialism, our opponents cannot (or rather should not) complain." He also says, he would avoid painting a glandular enlargement in the neck with tincture of iodine publicly in a homœopathic hospital, although he might unhesitatingly do it in private practice. And formally admits: "As regards the giving of morphia for sleeplessness, however necessary it may have been considered by the medical attendant, it cannot be called homœopathic treatment."

The homœopathic editor trusts his readers will thoroughly understand that he has no wish to object to those methods of treatment *per se*, although unsuitable for a hospital called homœopathic.

We are hardly surprised to find that Dr. Yeldham, the principal physician of the London Homœopathic Hospital, in what is called an excellent speech, delivered at the annual meeting of the Institution, referred to the possible expediency of a middle school, which would embrace both homœopathy and allopathy; and Dr. Reith said he knew many homœopathists who are prepared for the coalition.

The editor of the *Homœopathic Review* "has not the slightest doubt that some such step (or surrender) would be fraught with incalculable advantage to practical medicine," and it remains for us to see in what it should consist. If Hahnemann was so utterly mistaken about the efficacy of his infinitesimal doses; if every observation which he made upon the sick was an error; if every supposed cure was simply a recovery, is it not only not possible, but probable, that much of his reasoning and theorizing about the law *similia similibus curantur* is also false? If the frank and practical homœopathists must make such large concessions about the dose, will they not also be soon obliged to make equally large concessions about the theory? If we can judge from the following prescriptions, some of the homœopathists can make every required concession:

Quin. sulph. gr. viij; ext. cannibas ind. gr. iv; ext. aconit. rad. gr. iv. Make 8 pills; 1 every 3 or 4 hours. F—r.

Hydrarg. sub. mur. gr. iij; mass hydrarg. gr. iij; aloes gr. iij; podophyllin gr. $\frac{1}{8}$. Make 4 pills; to be taken at once. F.

Potassæ sulphuret 3j; aq. 3iv. Solve. M—d.

Pulv. alum erstæ 3iiss; tannin 3iiss; tinct. myrrhæ 3j. For a gargle. M—d.

Magnesia sulphat. 3iij; tinct. cort. aurant. 3xvj; acid. sulph. aromat. 3ss. M.

Ferri persulphat. 3j; adipis. 3j. M.

The *Medical Gazette* says: "Hahnemann taught that one grain of sulphur well rubbed up with 100 grains of sugar of milk could be developed into a medicine of tremendous energy. Some of his disciples of the Billy Barlow kind have made great improvements upon the simple proceeding of Hahnemann, and found out that 2 grains of sulphur mixed with 126 grains of

conium, quinine, and morphine, are still more efficacious. See following prescription: Sulphur pura, gr. ij; ext. conii mac., dr. iss, or 90 grains; quiniæ sulph., sc. iss, or 30 grains; morph. sulph., gr. iij; podophyllin, gr. iij; *i.e.* 126 grains of conium, quinine, morphine, and podophyllin, to 2 grains of sulphur. Make 30 pills, each containing 3 grains of conium, 1 grain of quinine, $\frac{1}{10}$ grain of morphine, $\frac{1}{10}$ podophyllin, and $\frac{1}{15}$ grain of very pure sulphur, and give one or two several times a-day in all cases in which sulphur was formerly considered useful, namely, in dyspepsia, biliousness, psore, eruptions, constipation, etc."

The Clinic.

MEDICAL WARDS OF MERCY HOSPITAL, MAY 27TH, 28TH, AND JUNE 7TH.—CLINICS BY PROF. N. S. DAVIS.—TUBERCULOSIS, DELIRIUM TREMENS, ETC.—REPORTED BY W. A. BARSTOW.

The clinic hours on the 27th and 28th of May, were occupied in the examination of cases of pulmonary tuberculosis. After each member of the class had carefully examined with the stethoscope the cases presenting different stages of this destructive malady, and the physical signs had been considered, in connection with the symptoms and history of each case, the special diagnostic features of each were presented in such a manner as to indicate not only the *nature* of the disease, but its extent and stage of progress. We pass over these details, as less profitable to the readers of the EXAMINER, than to the class of students in the hospital wards.

In reference to the treatment of tuberculous cases, it was remarked, that special attention should be given to the stage of the disease and to the circumstances of each case. For, while there are a few leading indications common to all, there are secondary or special indications in each case, arising from the stage of the disease and the sanitary surroundings of the pa-

tient. To allay the morbid sensibility of the pulmonary tissue and to sustain the functions of digestion and nutrition, are indications common to all cases and in all stages of pulmonary tuberculosis. In addition to these, in the first stage it is of great importance to maintain the full capacity of the lungs for air, and to supply the blood with whatever constituents the circumstances of the patient may have rendered deficient. In the second stage, in addition to the general indications, constant vigilance is required to ward off the frequent supervention of pneumonic, bronchial, and pleuritic attacks of inflammation, which often result in the establishment of wasting hectic. In the third or suppurative stage, we have still the two leading indications mentioned, with the addition of such means as will lessen the suppurative process and prevent exhausting discharges, whether from the skin or bowels.

To sustain the functions of digestion and nutrition, regular disciplined muscular exercise in the open air, so directed as to give full expansion to the chest, is of primary and essential importance; and should be persisted in so long as the patient's strength and the absence of positive inflammation will permit. There can be no reliable substitute for this. The sleeping-room should also be of good size, dry, and well ventilated. The diet should be abundant, digestible, and nutritious, but free from mere nervous excitants or exhilarants. In the formative stage of the disease, these means alone, judiciously and perseveringly used, will often arrest its progress, and restore the patient. But if more or less cough and morbid sensitiveness of the pulmonary organs are present, it will be better to direct, in addition, the use of one of the following formulæ:

R. Comp. Syrup of Hypophosphites,----- ʒiv.
Sulph. Morph.,----- 2 grs.

Mix. Take a teaspoonful before each meal; or,

R. Sub-Nit. Bismuth,----- ʒiij.
Sub-Carb. Ferri,----- ʒij.
Sulph. Morph.,----- 3 grs.

Mix, divide into 30 powders, and take one before breakfast, dinner, and at bedtime.

If there be much diminution in the capacity of the lungs for air, as indicated by shortness of the inspiratory act, a table-spoonful of the following solution may be taken after each meal with much advantage, *viz.*:

R.	Chlorate Potassa,-----	℥ij.
	Pulv. G. Arabic,-----	℥ij.
	Aqua,-----	℥vj.

Mix.

When the second stage comes, characterized, as it usually is, by pains in the chest, greater severity of cough, feverishness, and other symptoms of an inflammatory nature, the following expectorant and alterative solution has been found more beneficial than any other:

R.	Muriat. Ammonia,-----	℥iij.
	Tart. Ant. et Pot.,-----	2 grs.
	Sulph. Morph.,-----	8 grs.
	Syrup Glycyrrhiza,-----	℥iv.

Mix. Take a teaspoonful every four or six hours, according to the severity of the cough and soreness.

When the third or suppurative stage is fully established, and the patient expectorates purulent or muco-purulent matter freely with commencing sweats at night, all sedatives or nauseating expectorants should be discontinued, and such tonics as promote digestion and lessen the suppurative process should be given in their place. The powder of bismuth, iron, and morphine, already given, constitutes one of the best combinations that can be used at this stage. There are now in the Hospital wards three cases in which the cough, night sweats, and expectoration have been almost stopped by these powders, while the appetite and strength have decidedly improved. Another combination, which the lecturer has long used in this stage of phthisis, consists of:

R.	Glycerine,-----	℥iij.
	Syrup Iodide Iron,-----	℥j.
	Sulph. Morph.,-----	2 grs.

Mix. Give a teaspoonful three or four times a day.

Occasionally, cases are met with in the advanced stage, in

which the tubercular disease is complicated by chronic bronchitis of such grade that it greatly increases the dyspnœa and the quantity of expectoration. A strongly-marked case of this kind was presented to the class, in Ward No. 9, not long since. In such cases, the following formula has often afforded great relief to the patient:

Ry.	Bal. Copiaba,-----	℥iij.
	Chloroform,-----	℥iij.
	Syrup Tolu,-----	℥iv.
	Pulv. G. Arabic,-----	
	White Sugar,-----	ā ā ℥iij.
	Rub together, and add,	
	Camph. Tinct. Opii,-----	℥ij.
	Mint Water,-----	℥ij.

Mix. Take a teaspoonful before each meal and at bedtime.

It was remarked that, in the treatment of phthisis, while the constant aim should be to give the patient plenty of pure, dry air, judicious muscular exercise, and nutritious food, much good judgment is required in selecting such remedies, from time to time, as are adapted to the various stages and complications of each case. Cod-liver oil will be found useful in all stages of the disease, provided the patient can take it without nausea or unpleasant effects upon the stomach. But the fashionable routine of treating all cases of phthisis with cod-liver oil, Bourbon whiskey, and all the rich food they can stuff down, cannot be too strongly condemned.

Delirium Tremens.—At the clinic of June 17th, a patient, laboring under this disease, was presented to the class; and, after calling attention to the characteristic symptoms, and the history of the case, the lecturer stated, briefly, his views of the nature and treatment of the disease. He said it was a popular belief, sustained, in part at least, by medical opinion, that the immediate cause of delirium tremens was the withdrawal of an accustomed stimulant, generally of the alcoholic class. But his own observation, extending over 30 years, had certainly shown that two-thirds of all the cases he had seen came on while the patients were still directly under the influence of

these drinks, and, hence, could not be attributed to their sudden withdrawal. He believed the essential pathological condition to consist of defective nutrition, with morbid excitability of the brain-substance.

The close observer will find that so long as a drinking man or woman continues to eat regularly and digest the food taken, no symptoms of delirium occur. But when the drinking destroys the appetite, and the patient takes no food, or, if he takes it, rejects it by vomiting, in from one to three weeks his blood and tissues reach that actual impoverishment of the nutritive atoms, that, coupled with the direct irritative effects of the alcohol, tremulousness, morbid vigilance, and delirium supervene, to a greater or less extent, whether the alcoholic drink be continued or omitted. In the case here before us, the patient had not eaten a meal for 15 days, but had continued to drink liquor up to the hour of his admission into the Hospital in a state of excited delirium.

Inasmuch as the alcohol undergoes no digestion or assimilation in the human system, but circulates through it as a foreign substance, and is ultimately expelled through the organs of excretion, it adds nothing to the nutrition of the tissues. Its presence retards atomic changes, and, thereby, retains effete material, especially of the carbonaceous class, which ought to have been eliminated. Hence, under its influence, if the ingestion of food is suspended, the blood and tissues not only become impoverished of nutritive atoms, but they become surcharged with an excess of retained effete material which adds to the general functional derangements.

Treatment.—In the management of cases of delirium tremens, there are two well-defined objects to be accomplished, namely: to allay the morbid excitability of the nerve-tissues, so far as to procure rest; and to restore digestion and nutrition. Individual cases will present minor additional indications, from gastric and other complications, which the practitioner must meet as they arise. In the great majority of cases, the best remedy to allay the morbid excitability and mental hallucinations, so far as to induce sleep, is the bromide of potassa or

the bromide of ammonium, given in from 10 grs. to 20 grs. at a dose, and repeated every two hours until the required rest is obtained. In bad cases, from $\frac{1}{4}$ to $\frac{1}{2}$ gr. of sulphate of morphia may be given each evening for the first two or three days of the treatment. The patient before the class has taken 15 grs. of the bromide of potassa every two hours during the first 36 hours, and the same dose every three and four hours from that to the present time (three days). Half a grain of morphia was given each day for the first two days.

Since the first night after the patient entered the Hospital, the delirium has been fully controlled, and convalescence is now established. Nourishment has been carefully given; first, bland and liquid, in small quantities, such as milk and meat-broths, in doses of one to three tablespoonfuls every hour, except while asleep. Subsequently, any plain food may be given at ordinary mealtimes. For many years, the lecturer has used no alcoholic drinks in the treatment of delirium tremens.

Correspondence.

AN EVENING AT THE MEETING OF THE LONDON PATHOLOGICAL SOCIETY.

The London Pathological Society numbers among its membership many of the most valuable men in the medical profession in that city. Many in attendance upon its meetings are gray-haired and venerable, but the larger number are yet young men, who have risen by industry and talent to positions where they have abundant opportunities to pursue the study of pathology under the most favorable circumstances. Holding appointments as house-physicians and surgeons in the various hospitals, they are constantly coming upon cases whose histories, with verifications by autopsy, render them of intense interest to the profession. The aggregate of these labors furnishes abundant material to occupy the members at the stated meet-

ings of the Society, and the only trouble is to find time to do justice to the cases presented. Men learn there the necessity of condensation in the statement of cases and the presentation of opinions; and the way the members manifest their desire to terminate a voluble harangue is so decided, that the bravest cannot long resist the pressure. A statement is always in the hands of the President, of just what is to be presented at that meeting; and the moment a case is called, the person having it in hand steps forward and claims attention. If brief, terse, and lucid, the more is he acceptable; if it has special merit, it receives most careful hearing; if trivial or trite, it is not wise for a young man to weary their patience long. So, too, the pet theories of old men are frequently cut short in the midst of their expression by the merciless *little bell*. If their presence is secured it is for a purpose, and there must be no abuse.

The effect is good every way. If a man has nothing worth saying, he soon learns to keep still; if his subject has merit, he strives to set it forth in brief, but enjoying, manner; and so, in a single evening, matters are brought under consideration and referred for publication in their Transactions, which a physician in private practice might only reach during long years of patient observation.

The regular sessions of the Society occur every two weeks. They are held in the rooms owned by the Medico-Chirurgical Society, from which they are rented for use upon these evenings. The London Obstetrical Society make use of the same rooms on other evenings in the same way. The rooms impress one as the theatre of action, where many of the best men that have lived, and most talented, have labored for the amelioration of misery; for the benefit of the race. The living are there in all the vigor of manhood; the memories of the dead are there also. The room in which the sessions are held is about 40 feet square, with high walls, covered on every side by cases of books. The lighting by day is accomplished entirely from the ceiling. On every side among the cases, on brackets, are placed marble busts, in memory of the venerable dead who once were members and officers of these societies. I made note of some of these,

and of the years when they were presidents of the Medico-Chirurgical Society. I give a few of them as they were noted, but not in the order of their election. The likenesses are said, in most instances, to be very striking, and I could but think that our British brethren would do the world a favor if they would cause these busts to be photographed, that the profession in every land, who have admired these men while living, might now the better perpetuate their memories, by placing side by side their works and likenesses.

Among these, where all are chief, are the names of John Abernethy, President of the Society in 1823; of Benjamin Travers, in 1827; of William Laurence, in 1831; of Sir Astley Cooper, in 1819; of Sir Henry Hallford, in 1810; of Gilbert Blain, in 1813; of William Babington, in 1817; of Thomas Addison, in 1849; of Sir Benj. Brodie, in 1839; of James M. Arnott, in 1847; of Sir Charles Locock, in 1857; of Cæsar H. Hawkins, in 1855; and other names, which space forbids me to write, to perpetuate the memory of whom receives the sanction of the world. But I must come to the meeting of the Society, which I attended on the 6th of May last.

The Society convened at 8 o'clock. Its President is John Simon, known to many Americans, and now holding the position as Chief of the Medical Department of the Privy Council, and having a general surveillance of epidemics, etc., as they occur in the kingdom, and giving direction as governmental attention is demanded in medical matters. I noticed that he attained the Astley Cooper prize in Guy's Hospital, in 1844, his subject being the "Thymus Gland." His preparations are carefully preserved in that museum, in accordance with the rules of the hospital. He makes a good presiding officer, and the utmost decorum was manifest. About 60 members were present, all very promptly in their seats, as though they came for a purpose and had business to transact. I give the minutes of some 20 of the 27 cases which had been enrolled in the order of their presentation. I am unable to give the names of the persons offering them.

First, Second, and Third, were specimens of morbid growths of the femur.

Fourth. Granular disease of the kidney. Capsule adherent; renal artery terminates in a cul-de-sac; weight 6 grains.

Fifth. Disease of the parietal bones, with specimens and history of the case. Skull thickened; brain covered with solidified lymph; patient sometimes violent in temper; no other disease manifest.

Sixth. Endocarditis. Specimen presented, case described; lymph shown on the tricuspid valves.

Seventh. Deformities of the chest—Pigeon-breast. Motion of heart discoverable through the thin walls at the fifth left costal interspace; alternates with recession of spaces on the right side.

Eighth. Perforation of chest—Pneumo-thorax.

Ninth. Four specimens of disease of the supra-renal capsule. The bronzing proportionate to the slowness, but not to the severity of the capsular disease.

Tenth. Multilocular ovarian tumor. Removed the previous day; description of its diagnosis and of operation; blood found in cysts; woman still living.

Eleventh. Tuberculated liver. Description of case; with remarks upon entozoa in the gall-bladder.

Twelfth. Follicular tumors upon parietal bone, with drawings. Semblance to malignant tumors; vascular; remarks on arrest of hemorrhage.

Thirteenth. Abdominal and thoracic aneurismal rupture, with description of sac. Difficulty of diagnosis in this case.

Fourteenth. Colloid cancer of stomach. Specimen presented; reasons for diagnosis. Referred to Cancer Committee.

Fifteenth. Ulceration of the larynx, with obstruction of the œsophagus.

Sixteenth. Epithelial cancer of the œsophagus and lung. Interest from deposit in the lung.

Seventeenth. Microscopic specimens, delineating inflammation of the mesentery of the frog. Stages of inflammation and the appearance of corpuscles; passage of white corpuscles through the veins; passage of a red corpuscle through thick vessel wall. Here occurred a lively discussion on the passage of corpuscles.

Eighteenth. Fracture of femur. Injury of vessels; gangrene following.

Nineteenth. Case of swallowing of date-stones, with strangulation of hernia, and passages of these from artificial opening in one month; gradual closure of intestinal opening.

Twentieth. Case of curious deposit in the lungs, liver, and kidneys.

These, with seven cases additional, were passed in rapid review, only those points which were unusual being seized upon and discussed briefly, as the cases suggested them. The meeting adjourned at *10 o'clock*, when a cold collation was served, according to custom, in the front parlor, or reception-room; the audience-room being on the first floor also, and in the rear of the former. An informal and spirited discussion was held among a few of the members after adjournment, having reference to the subjects presented with case *Seventeen*.

Prof. Lionel Beale, to whose courtesy and invitation I was indebted for the pleasure of attendance at the meeting, entered heartily into the discussion, as to the precise seat of the formation of pus corpuscles. His views, as given in his work on the growth of tissues, are being received with great favor, so far as I can judge, by those who have given them candid and careful study.

Such extended opportunities for study as these united efforts afford, are of untold value; and they account, in part, for the attainments of those men who have had to do very largely in shaping the medical literature and opinions of the world.

America, young in everything else, is yet in the infancy of such labors; but the facilities for improvement are more and more at hand, as our cities increase and our hospitals multiply. We may confidently anticipate that, as all eyes are now turned to a much more thorough and improved system of medical education, societies for medical improvement will also be multiplied, and that these, being wisely conducted, will enlist the best energies and talents of the profession, and secure for us an honorable position and a just respect by all who appreciate the value of medical attainment, both at home and in other lands.

The labors of the London Pathological Society are well worthy of emulation. It is in the power of our Chicago physicians and surgeons to institute a favorable comparison of efforts if they will.

J. H. H.

HASTINGS, Minn., June 12, 1868.

PROFESSOR DAVIS,

Dear Sir:—At the meeting of the Morgan County Medical Society, in February last, in your State, the case of placenta prævia reported, led Dr. Prince to say that “he believed in this presentation, the profession would eventually adopt the maxim, ‘the most speedy delivery possible.’”

With the highest respect for Dr. Prince, as a practitioner and a writer, I feel strongly impressed with the duty I owe to my fellow-beings, to give “mine opinion” and show a better way. Speedy delivery has two important objections: it is exceedingly dangerous, and in my opinion unnecessary. To many this will appear paradoxical; but it is, nevertheless, perfectly true. I am satisfied that a general resort to speedy delivery, as a main dependence, will result in the death of many women. My preceptor, in the State of New York, lost two cases, by that practice, out of three. My first was saved by that practice, but required very assiduous nursing and stimulating for many hours. Last fall we had two cases in this city, to both of which I was called in counsel. One was “delivered speedily” by another physician, of the most consummate skill, and proved fatal in half an hour. In the other case, we loosened the placenta and waited, and she delivered herself in three hours with entire safety—the hemorrhage ceasing upon the detachment of the placenta, and she gradually reviving from the state of depression to which she had been brought by the hemorrhage.

I think the article on this subject in Professor Simpson's Works, Vol. I., p. 599, one of the most complete pieces of good reasoning that I have ever seen; and that it should be in the hands of every practitioner of midwifery. I am an entire convert to his doctrine, and believe that his practice will save

almost every case. An anxious study of this subject, and a practice of forty years, have led me firmly to this conclusion.

It would be quite improper to lengthen this paper, by attempting to give even a synopsis of Prof. Simpson's statements and arguments on this subject. I greatly hope that many of the readers of the EXAMINER will be led to possess themselves of a copy of his obstetrical works, and read it for themselves.

One of his positions is, that complete detachment of the placenta stops the hemorrhage which partial detachment produces. This looks inconsistent. To judge correctly of it, we must read his article and weigh his reasoning and facts.

He says the uterine vessels collapse as far as detachment takes place; and that the hemorrhage connected with partial detachment is through the placenta, and not directly from the uterine vessels. This I believe to be so.

To deliver a woman exhausted with hemorrhage, whilst we leave her still to bleed through a partially detached placenta, is one of the most dangerous operations that we can possibly subject her to. Is it not like amputating a thigh without a tourniquet? Or, after an accident, before reaction? It looks to me very much like these. Let me warn my brethren of the profession, therefore, how they proceed to "the most speedy possible delivery" in cases of placenta prævia, for it is often fraught with the most awful danger!

Save the blood of your patient with the tampon, cold, and rest, till you find delivery necessary. Then loosen the placenta, and wait for her to revive if depressed, and deliver herself if she can. If not, after reaction has taken place, so as to render it safe, deliver, and never before. The danger is from loss of blood. That, by detachment, is under our control. Immediate delivery can be but seldom necessary. It should not be resorted to to stop hemorrhage. If it be, it will often be followed by speedy death.

Mr. Editor, please excuse my plainness of speech, and assure my brethren of the continued esteem of an old man in the profession.

Respectfully yours,

F. B. ETHERIDGE.

Selections.

A NEW AND EFFECTIVE METHOD OF TREATING PHTHISIS PULMONALIS.

Dr. Carl Both, Boston, Mass., has written a monograph, in which he pronounces the curability of consumption with the greatest confidence, through *artificial calcification*. It is a practical application of the cellular pathology, announced by Virchow; and the author's theories may be given in his own words:

"As a nation consists of millions of single individuals, each holding a superior or inferior position, each dying and being replaced without injury to the whole, so is our body a commonwealth of cells, each of which has its office; each may die and become replaced by another. As a statesman watches over each individual, and tries to improve each for the benefit of the whole, so the physician should know all cells of the body, their office, and their place. He should cause their removal in case of unfitness or decay, and prevent such cells as do not fit its general structure from entering the body."

The cells composing our body live and are sustained by the food we eat, and if we cut off our food, we cut off the nourishment of the cells. By giving different food, different effects on the cells are produced. The blood requires lime for calcifying displaced or degenerated cells by depositing that substance in them.

He wishes to be understood, *that tubercles in the lungs are composed of, and originate from, blood-globules which have escaped out of the general circulation, through the bursting of an obstructed capillary vessel. That this obstruction takes place where the respiration is suppressed.* From this the conclusion is drawn *that tubercles can nowhere originate in the lungs, except in those parts where respiration has been oppressed or has ceased.*

The natural healing process consists in the calcification of the diseased parts, so that they appear as if made of chalk, though the original cells and tissues can yet be detected by the microscope. It is evident, therefore, that in such cases, the blood must have been able to furnish a considerable quantity of lime, to provide for the calcification of the decayed parts. His treatment is divided into three sections, each of which finally support the other in their effects:—

1st.—The extension and cleansing of the lung by pressing air into it.

2d.—The introduction of lime into the blood in sufficient quantity for the calcification of the tubercles; and the purification of the blood by higher oxidation.

3d.—The determination and regulation of a diet to suit the particular form and degree of disease.

The direct treatment of the lungs consists in pressing the air into them by natural inspiration, powerfully stimulated by certain muscular exercises which are calculated to effect this object. If, in the case of a collapsed lung and chest, the pressure of air in the lungs is increased, that organ and the thorax will necessarily be extended; and the air will pass gently and gradually into the smallest bronchi. The air vesicles and obstructed bronchi being opened, the pus and mucus contained in them will be expelled by the increased ciliary motion, by the revolving air, and by the action of the cough. At the same time the capillary circulation will be increased, diosmosis of the cells renewed, and many of them rescued from fatty degeneration and decay.

To increase the nervous action of the lung, and to produce at the same time an increased pressure, tension of the respiratory muscles must be resorted to, as a pumping force on one side, and as an irritant on the respiratory nerves by reflex irritation on the other.

To demonstrate the result, the following practice will be found of service: Let a person rest the whole of his weight on the ends of his toes and fingers in a horizontal position. He will find, on rising, that he must take larger and more forcible inspirations than were otherwise possible. By means of the forced inspiration effected in this way, air is driven into the diseased part of the lungs, and distends them in consequence.

The treatment of the blood consists, *first*, in purifying it from those substances which cause the profuse perspiration. The food is divided into two classes—respiratory and plastic. The first is that which contains no nitrogen. The second is that which does contain nitrogen, and which replaces the materials consumed by the action of the body.

The treatment of the blood consists, *second*, in the introduction of *phosphorus* and *sulphur*.

Having provided for the introduction of sulphur and phosphorus into the blood, we are, *third*, to obtain a sufficiency of *lime*, *silica*, and *magnesia*.

These materials are abundantly found in the hulls of oats,

barley, wheat, and rye; but in the early stages of the treatment these cannot be readily digested. Extracts of herbs and plants, known to be rich in these three substances, such as *Triticum repens*, *Achillea Millefolia*, *Marrubium vulgare*, *Leontodon taraxacum*, &c., serve as a proper substitute. The general rule for the administration of food, in every case, should be the following: to *adjust the quantity given to the amount of oxygen to be absorbed*. For *respiratory* food, make use of whey, freshly made of boiled milk, from which the caseine has been separated by adding a little cream of tartar; malt sugar, honey, fresh butter; in the spring and summer, milk, after it has become thick by the formation of lactic acid. For *plastic* food, give Liebig's extract of meat, when the digestion is very bad! Raw meat, chopped fine, given in the form of a salad, is excellent. When the digestion is good, beef, mutton, game, and fresh fish, are the best articles of food.

The bread should be made of rye meal and corn flour (not sifted too finely). Sago, cracked wheat, farina, rice, corn and oatmeal, tomatoes, and all kinds of fresh and acid fruits, may be given as the case requires it.

A detailed statement is added of the history and treatment of twenty-one patients, between the ages of nineteen and forty-seven, who have been benefited, or entirely cured; with the exception of those who had diseases of the bowels. The author believes that by following the method described, every tubercular affection of the lung can be arrested without fail—only there must not be large open caverns.

Book Notices.

The Indigestions; or the Diseases of the Digestive Organs Functionally Treated. By THOMAS KING CHAMBERS, Honorary Physician to H.R.H., the Prince of Wales; Consulting Physician and Lecturer on the Practice of Medicine in St. Mary's Hospital; etc., etc., etc. Second American, from the Second and Revised London, Edition. Philadelphia: HENRY C. LEA. 1868. For sale by W. B. KEEN & Co., Chicago.

This volume contains nine chapters, on the following sub-

jects: 1. Introduction; 2. Indigestion of various kinds; Habits of Social Life Leading to Indigestion; 4. Abdominal Pains; 5. Urinating; 6. Flatulence; 7. Diarrhœa; 8. Constipation and Costiveness; 9. Nervous Disorders connected with Indigestion. The writings of Dr. Chambers are too well known to need any commendation from us.

The Neuroses of the Skin: Their Pathology and Treatment.

By HOWARD F. DAMON, A.M., M.D., Fellow of the Massachusetts Medical Society, etc., etc., etc. Philadelphia: J. B. LIPPINCOTT & Co. 1868. For sale by S. C. GRIGGS & Co., Chicago. Price \$2.00.

This is an elegantly published monograph, of 114 pages; on a class of diseases obscure in pathology, and often obstinate in their continuance. Under the head of neuroses of the skin, the author treats of hyperæsthesia, dermatalgia, prurigo, urticaria, zoster, and anæsthesia. Several illustrative cases are given at the close of the volume. It will be found worthy of a careful perusal.

Materia Medica, for the Use of Students. By JOHN B. BIDDLE, M.D., Prof. of Materia Medica and General Therapeutics in Jefferson Medical College, etc., etc. Third Edition, with Illustrations. Philadelphia: LINDSAY & BLAKISTON. 1868. Pp. 384. Price \$4.00. For sale by W. B. KEEN & Co., 148 Lake Street.

In this edition of his text-book on Materia Medica, the author has introduced quite a number of articles and topics omitted in the previous editions. Among them, are the several new anæsthetics, the sulphites and hyposulphites, the methods of hypodermic injections, and the atomizing of liquids. The work is increased both in size and value.

Circular No. 1. War Department, Surgeon-General's Office, Washington, June 10th, 1868. Report on Epidemic Cholera and Yellow Fever in the U.S. Army, during 1867.

This is a folio volume, or report, of 156 pages, containing

observations and statistics of great value, on the subjects of cholera and yellow fever.

Lessons on Physical Diagnosis. By ALFRED L. LOOMIS, M.D., Prof. Institutes and Practice of Medicine in the Med. Dep't of University of New York, and Physician to Bellevue and Charity Hospitals. New York: ROB'T M. DEWITT Publisher, No. 11 Frankfort Street.

This is a well-published volume, of 159 pages. It is a brief, but excellent treatise on the methods of physical exploration in the diagnosis of diseases.

Atlas of Venereal Diseases, by A. CULLERIER, Surgeon to the Hospital Du Mida, etc., etc. Translated from the French, with notes and additions, by FREEMAN J. BUMSTEAD, M.D., Prof. of Venereal Diseases in the College of Physicians and Surgeons, N.Y., etc. Published by HENRY C. LEE, Phil.

The translation contains the text of Cullerier's work, with brief comments by Prof. Bumstead. Its chief merit, however, is in its illustrations, there being in the whole work twenty-six colored lithographic plates, containing about one hundred and fifty beautiful figures of venereal diseases. It is issued in five numbers, at three dollars each, of which three are already out.

As was above stated, the plates constitute the chief merit of the work, being extremely beautiful, and numerous enough to make a good gallery of venereal diseases. Equal praise cannot be given to the text. Cullerier is a loose reasoner, and only passably good in pathological description, while his discussion of the therapeutical branch of the subject is quite imperfect. Prof. Bumstead would have been the right man to correct these deficiencies, but he has limited his notes for the most part to a few brief comments on points wherein he differs from his author. This brevity was probably adhered to, in order to avoid increasing the bulk and expense of the work too much.

In his general method and style Cullerier shows good sense, but no precision or acuteness. In respect to the nature of syphilis he is a "unicist," that is, he admits only one virus for

both the soft and the hard chancre, a position which may be considered as forever overthrown. The separate nature of soft and hard chancre, or, more properly speaking, of chancroid and true syphilis, is so intimately connected with the pathology and therapeutics of venereal diseases that one can by no means be a thoroughly reliable practitioner who does not understand the distinction between them.

In respect to gonorrhœa Cullivier commits the error of saying that the chronic form is not contagious, a most false and dangerous position to assume. The pathological connection between chronic gonorrhœa and granular urethritis, granular ophthalmia, and granular inflammation of the cervix uteri, has escaped his attention altogether. With characteristic French morality, he recommends those afflicted with chronic gonorrhœa to practice sexual intercourse, lest the erections caused by total abstinence from women should aggravate the inflammation.

Bumstead's notes have done much to correct the author's errors, but are not sufficient to rectify everything. As was remarked above, the merit of the work does not consist in its text, but in its superb colored plates, which, in fulness, beauty, and variety surpass anything previously published.

Klinik der Ohrenkrankheiten. Ein handbuch für Studirende und Aertze. Von Dr. S. Moos, Praktischer Arzt und Docent an der Universität in Heidelberg. Wein. 1866. WILHELM BRAWMÜLLER.

We have received from the publishers, through B. Westerman & Co., 440 Broadway, N. Y., this valuable hand-book of Dr. Moos upon diseases of the ear. The general, or first part, is devoted to the physical examination of the organs of hearing, embracing the outer, middle, and inner ear, and including a description of the various instruments made use of for this purpose. The value of Phinoscopy in the diagnosis of the diseases of the middle ear is fully recognized, and directions for the manipulation, taken chiefly from Semeleden, are given in detail.

In the chapter devoted to the examination of the inner ear, the theory of Helmholtz is discussed, and its value considered. The second, or special part, is devoted to the diseases of the ear. In the first six chapters, the author discusses the affections of the ear—embracing the inflammations, acute and chronic, circumscribed, diffused, of this portion of the organ. In the next eight chapters are considered the pathological changes in the tympanum, and the diseases of the middle ear. The remainder of the volume is devoted to the diseases of the nervous apparatus.

From the somewhat hasty examination which we have given to the work, we have no hesitation in recommending it to those of our readers who are interested in German medical literature. To the specialist in this department no recommendation of ours will be necessary.

Editorial.

MEDICAL COLLEGE INSTRUCTION.—Most, and perhaps all, the medical schools in our country have issued their announcements for the annual courses of instruction for 1868-9. With very few exceptions, they indicate a continuance of the same heterogeneous courses of instruction that have characterized our medical colleges ever since the colonial period of our country's history. The facilities for clinical teaching, in most of the schools, have been greatly increased during the last few years, and many of them have increased the number of their faculties and extended their lecture-terms to five months. But with only one exception, so far as we have observed, they still cling to the old, and often condemned, method of teaching all their students in one class, and subjecting them to the formal task of listening to lectures on all the departments of medical science and art in the space of four or five months. There is, however, one exception.

The Chicago Medical College, founded in 1859, and organ-

ized on the basis of systematic and progressive teaching, has this year completed its curriculum in accordance with the plan of its founders, and in full accordance with the recommendations of the Convention of Medical College Delegates, in Cincinnati, in 1867, and with the repeated recommendations of the American Medical Association. With a full corps of professors; with a complete curriculum, embracing every department of medical science and art; as it exists at this time; with the most ample facilities for hospital clinical instruction; and every means required for demonstrative teaching in all the departments, this college offers to the profession every facility for a systematic and complete medical education.

Having divided the whole number of branches taught into three groups, corresponding with each of the three years required for medical study, and extended the regular annual lecture-term to six months, the intelligent student can here enter upon the important work of acquiring a knowledge of medicine, in the same rational and systematic manner that he would in studying any other departments of science. Instead of crowding all into one class, those commencing study can limit their attention to such branches only as are adapted to their first year of pupilage, and thereby lay a proper foundation. Those in the middle part of their period of study can limit their attention to just the branches adapted to the second year; and the same with the third. Daily examinations in the lecture-room, and thorough examinations at the close of each annual course, complete the work of securing to the student both completeness of knowledge and thoroughness of mental discipline.

The Chicago Medical College thus presents to the profession a theoretical completeness of organization, but its actual practical advantages are equally perfect. In clinical advantages it has no superior in this or any other country. Mercy Hospital, founded in 1850, so far as medical and surgical attendance and clinical instruction are concerned, is as much a part of Chicago Medical College, as Bellevue Hospital is of Bellevue Hospital Medical College in New York. This hospital, with its medical, surgical, and lying-in departments, not only constitutes an ex-

cellent clinical school, but the classes in attendance are always so divided that each student is enabled to receive direct personal instruction in all the methods of examination and diagnosis. Cook County Hospital, always filled with a large number and variety of patients, is only five minutes' walk from the college building. It is supplied with an able corps of clinical teachers, among whom are Professors H. A. Johnson and Tho's Bevan, of the Chicago Medical College Faculty.

These two hospitals not only afford the most ample field for the clinical study of practical medicine, surgery, obstetrics, and morbid anatomy, but the wards for diseases of the eye and ear in the County Hospital, under the charge of Dr. J. S. Hildreth, afford full and thorough clinical instruction concerning the diseases and accidents of these important organs. Full personal instruction of the student in the use of the ophthalmoscope, laryngoscope, endoscope, microscope, and the various means of physical exploration and diagnosis, is included as a part of the ordinary courses of instruction by the members of the faculty, without extra charge. In all the schools of New York, Philadelphia, or Boston, if the student obtains direct personal instruction and practice in auscultation, ophthalmology, microscopy, etc., he must pay some professor or assistant an extra fee of from \$15 to \$30, for just what he receives fully in the regular course in the Chicago Medical College.

We are thus particular in calling attention to this college, not because we happen to hold a place in its faculty, but simply for the reason that the degree of patronage it receives from the profession of the North-west will have an important bearing on the success of the movement for a more extended and rational system of medical college instruction throughout the whole country.

For more than a-quarter of a century, the profession, through the National and State organizations, have been calling upon the colleges for the adoption of a system of instruction more adequate to the existing state of medical science, and better adapted to secure a thorough education of those who shall enter the ranks of the profession. These demands finally culminated

in the holding of a convention of delegates from medical colleges exclusively, in Cincinnati, in May, 1867. That convention, after full consideration, very unanimously recommended a revised system of medical college instruction, embracing a standard of preliminary education, six months' lecture-term, division of the various branches into three groups, and the requirement of three courses of lectures for graduation, etc. The plan received the immediate and unanimous approval of a full meeting of the American Medical Association, and, within the last few months, it has been equally sanctioned and its adoption urged upon the colleges by the State Medical Societies of Illinois, Missouri, Iowa, and others.

Chicago Medical College, complete in every department; commanding every facility for instruction that can be found in any part of our country; and pecuniarily free from all embarrassment, present or prospective, has boldly and fully adopted the revised system recommended. If those enlightened members of the profession throughout the North-west, who have long desired to see our medical colleges substantially improved, will so direct their influence over students as to cause this school to be well sustained, it will speedily induce others to follow her example, and the long-desired change will become universal. Will each one recognize his personal responsibility in this matter?

CONDENSATION.—The Senior Editor of the *Chicago Medical Journal* writes as follows, in reference to his new associate in the editorial work: "He will assume the task of *translations* of valuable papers from foreign medical journals, and in *each No.* furnish an epitome of *all* that attracts professional attention in the Old World."

Just what "*the task of translations*" may mean, we will not stop to inquire. But, inasmuch as "*each No.*" of the *Chicago Medical Journal* contains only 32 pages, and some of these are always devoted to the "*Apostle*," either the professional attention in the Old World must be very inactive, or the Associate-Editor will exhibit an extraordinary power of *epitomizing*.

SICKNESS OF PREGNANCY.—A writer in the *London Lancet* suggests belladonna, as probably the best remedy for allaying the reflex or sympathetic gastric disturbance of pregnancy. For several years we have used small doses of belladonna or atropine, before breakfast and dinner, for this purpose, with success. Sometimes, the relief has been more complete when each dose of the narcotic was associated with five or six drops of hydrochloric acid diluted with water.

A CONTRAST.—The Medical School of the University of Berlin has 401 students in attendance. Its corps of instructors consists of 14 ordinary professors, 12 extraordinary, and 24 private instructors. We have several medical schools in this country that claim an attendance of over 400 students, who receive all their instruction annually from 7 or 8 professors, and in the short space of 4 or 5 months. Either the faculty in Berlin must be very old foggyish, or some of our schools are little better than a farce.

PROFESSORS.—The Chair of Physiology in Jefferson Medical College, made vacant by the resignation of Prof. Robly Dunglison, has been filled by the appointment of J. Atkin Meigs, M.D., of Philadelphia. Tho's Bevan, M.D., Physician to Cook Co. Hospital, has been appointed to the Chair of Public Hygiene in Chicago Medical College. J. P. Ross, M.D., Physician to Cook County Hospital, has been appointed to the Chair of Diseases of the Chest in Rush Medical College.

BERKSHIRE MEDICAL COLLEGE.—This institution, located at Pittsfield, Massachusetts, and for many years prosperous, has finally closed its doors, and will not probably be reöpened.

NEW MEDICAL COLLEGE.—An effort is being made to organize a new medical college in Detroit, Mich.

MICHIGAN UNIVERSITY.—It is understood that the Regents of the University of Michigan have abandoned the idea of mixing homœopathy into the medical department of the University.

THE MONTHLY MEDICAL REPRINT.—This is a new monthly journal, published by John Hillyer, 14 South William Street, New York. Each number contains 64 closely-printed, double-column pages. It is entirely filled with the reprint "of the most valuable articles published in the latest issues" of the British medical periodicals. Price *five dollars* per annum.

THE HALF-YEARLY ABSTRACT OF MEDICAL SCIENCES.—The July No. of this labor-saving volume is promptly on our table, and contains its usual choice selection of foreign medical literature. Published by Henry C. Lea, Philadelphia.

UNIVERSITY OF NASHVILLE.—During the past year, an effort seems to have been made to remove Professors Jennings, Eve, and Jones from their chairs in the Medical Department of the University. They denied the right of the rest of the Faculty to eject them, and appealed to the proper court. A decision has recently been rendered, sustaining their appeal, and enjoining the rest of the Faculty from interfering with them in the performance of their duties in the college.

MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA. Professors Chisolm and Miles have resigned from the chairs which they respectively filled. Professor R. A. Kinloch has been transferred from the chair of materia medica and therapeutics to that of surgery, made vacant by the resignation of Professor Chisolm. Dr. George E. Trescott has been elected professor of materia medica and therapeutics in the place of Professor Kinloch, transferred, and Dr. Middleton Michel has been elected professor of general anatomy and physiology, in the place of Professor Miles.

MEDICAL DEPARTMENT OF UNIVERSITY OF LOUISVILLE.—Professors Henry Miller, H. M. Bullit, Lewellyn Powell, Lewis Rogers, and David W. Yandell have resigned their chairs in this Institution. The names of these gentlemen are entirely familiar to the medical public, and the arduous services rendered by most of them have been justly valued and fully appreciated.

The chairs made vacant have been filled by the election of Drs. Theodore S. Bell, John S. Crowe, L. P. Yandell, Jr., and E. R. Palmer, all of Louisville, Ky.

MORTALITY REPORT FOR THE MONTH OF JUNE:—

CAUSES OF DEATH.

Accident, drowned, --	4	Enteritis -----	1	Edema glottitis -----	1
" railroad, --	1	Encephalus, general -	2	Old Age -----	1
" poisoned, --	1	Erysipelas, -----	2	" and paralysis	2
Abscess, pelvic -----	1	Exhaustion & old age-	1	Paralysis -----	2
" hip-joint -----	1	Fever, puerperal -----	2	Peritonitis -----	1
Aneurism, rupture, --	1	" scarlet -----	8	Pleurisy -----	1
Apoplexy -----	2	" typhoid -----	8	Pneumonia, -----	21
Asphyxia -----	1	" typhus -----	1	Pneumonia, broncho -	2
Asthma -----	3	" pernicious -----	1	Pneumonia, typhoid --	2
Birth, premature -----	15	Gangrene, seniles -----	1	Pneumonia, tuberculus	1
" still -----	32	" fol. amputa-		Pneumonia, complicated	
Bronchitis -----	2	tion of thigh -----	1	with Measles -----	1
" chronic -----	1	Groin, carcinoma of --	1	Phthisis pulmonalis --	22
Brain, congestion of --	5	Hepatitis, chronic --	1	Phthisis Mesenterica -	1
" disease of -----	1	Heart, disease of -----	1	Scrofula, with fatty de-	
" inflammation --	1	" valvular disease	2	generation of liver. -	1
Bright's disease -----	1	Hydrothorax, -----	2	Spine, injury of -----	1
Bowels, inflammation, -	1	Hydrocephalus -----	1	Stomach, cancer of --	2
Cancer -----	1	" acute -----	3	" chronic derange. -	1
" of intestines --	1	Inanition -----	5	Suicide -----	4
" of tongue -----	1	Intestines, ulceration-	1	Sunstroke -----	4
Convulsions -----	38	Kidneys and Liver,		Small-pox -----	9
" puerperal, -----	3	organic disease of --	1	" complicated	
" fm teething -----	5	Kidneys, disease of --	1	with meningitis -----	1
Cholera infantum -----	8	Laryngitis -----	2	Tabes mesenterica, --	6
Chicken-pox, retroces. -	1	Liver, inflammation of	2	Tetanus traumaticus, -	1
Croup -----	7	Lungs, congestion of --	1	Tetanus -----	1
" foll. whoop-cough	1	Lungs, paralysis of --	1	Teething -----	2
Debility -----	8	Measles -----	9	" and convulsions, 2	
" and old age, -----	1	" complicated with		Throat, inflammation. -	1
Diffuse infm. cellular		pneumonia -----	1	Tumor, abdominal -----	1
tissue -----	1	" " bronchitis -----	1	Uterus, cancer of -----	3
Delirium tremens -----	2	Meningitis -----	1	Uterus, disease of -----	1
Diphtheria -----	1	" cerebro-spinal, 2		Uterus, hemorrhage of	1
Diarrhœa -----	13	" tuberculosis, -----	2	Whooping-Cough -----	6
" chronic, -----	1	Mouth, canker sore --	2	Wounds, inflicted by	
Dropsy -----	2	Manslaughter, -----	1	parents, -----	1
Dysentery, -----	3	Nephritis -----	1	Total -----	305

COMPARISON.

Deaths in June, 1868, --	305	Deaths in June, 1867, --	283	Increase, -----	22
Deaths in May, 1868, -----	321	Decrease, -----			16

AGES.

Under 5 -----	173	40 to 50 -----	13	90 to 100 -----	0
5 to 10 -----	12	50 to 60 -----	19	100 to 110 -----	0
10 to 20 -----	11	60 to 70 -----	19	Unknown -----	2
20 to 30 -----	21	70 to 80 -----	8		
30 to 40 -----	23	80 to 90 -----	4	Total -----	305
Males, -----	173	Females, -----	132	Total, -----	305
Single, -----	222	Married, -----	83	Total, -----	305
White, -----	298	Colored, -----	7	Total, -----	305

NATIVITY.

Chicago -----	136	England -----	4	Scotland -----	2
Other parts U. S. ---	52	Germany -----	42	Sweden -----	14
Africa, -----	1	Holland -----	1	West Indies, -----	1
Bohemia -----	1	Ireland -----	33	Unknown -----	3
Canada -----	3	Norway -----	7		
Denmark -----	2	Poland -----	1	Total -----	305

DEATHS BY SMALL-POX.

For the Month of June, 1868.

3d Ward -----	2	14th Ward -----	1
7th Ward -----	0	Lake Hospital -----	3
12th Ward -----	1	Immigrant -----	1
13th Ward -----	2		
		Total, -----	10

MORTALITY BY WARDS FOR THE MONTH.

Ward.	Mortality.	Pop. in 1868.	One death in	Ward.	Mortality.	Pop. in 1868.	One death in
1---	2	11,499	5,749 1-2	14---	14	14,168	1,012
2---	15	13,539	902 2-3	15---	19	20,429	1,075 1-5
3---	13	16,620	1,278 1-2	16---	19	16,011	842 5-8
4---	20	16,499	825	Unknown,	1		
5---	16	13,434	839 2-3	County hosp.	7		
6---	17	12,407	729 7-8	Chi. River,	1		
7---	28	21,657	773 1-2	Alexian Bros.	1		
8---	23	14,003	608 4-5	Conv't Sa. He.	1		
9---	12	18,050	1,504 1-6	Soldier's hom.	1		
10---	12	13,644	1,120 1-3	Marine hos.	1		
11---	19	13,117	690 1-3	St. Luke's hos.	1		
12---	11	14,739	1,340	Orphan asyl.	9	Immigrants,	23
13---	15	11,113	740 6-7	Lake Hosp.,	3	Police Stat. 2d Pre.	1
Total,							
							305

MONEY RECEIPTS TO JULY 28TH.—Drs. John Charlton, \$3; A. Chapman, 1.50; H. C. Hutchinson, 3; J. M. Steele, 3; S. D. Mercer, 3; J. Y. Campbell, 3; D. C. Stillions, 3; J. W. McAfee, 3.

ON THE NATURE OF VACCINE VIRUS.—The following is an abstract of a paper presented to the Académie des Sciences, by M. A. Chauveau, on the nature of vaccine virus, and the experimental determination of the elements forming the principle of virulent vaccinal serosity:

The virulent humor furnished by the virulent pustule is a complex product, analogous in its composition to all the non-specific pathological serosities. Neither chemical analysis, nor microscopical examinations, have revealed any special element to which the peculiar activity of vaccinia might be attributed. This activity necessarily exists in the common elements which take part in the formation of vaccinal serosity, and which, according to the opinion of Claude Bernard, have acquired a

virulent property through simple isomeric modification. But does this metamorphosis, which establishes the virulence, affect all the elements of vaccine? or, rather, does it act upon some one or some few of them; does the virulent activity require the concurrence of all these elements, or is one sufficient for its production? M. Chauveau has attempted to resolve these problems by isolating the principles which enter into the composition of vaccinal serosity, and subjecting each of them to the criterion of physiological experimentation: serum containing, together with albumen which forms the base, all the other soluble substances, was dealt with on the one hand, and on the other, the solid elements, that is to say, the leucocytes and the elementary granular bodies which are suspended in the serous fluid.

M. A. Chauveau derived the following results from his experiments: The leucocytes do not constitute the essential agents of the virulence. They may share in this property with the other elements of vaccinal fluid; but they do not possess it exclusively.

M. Chauveau succeeded in obtaining vaccinal serosity entirely free from all solid bodies, including the finest molecules. This was done by utilizing the phenomenon generally known as diffusion.

Whilst the inoculations of the perfect vaccine succeeded, that of the vaccine deprived of its solid matter always and most completely failed.

M. Chauveau, to give this fact its whole significance, states that "the purely serous liquid was always tested by heat, or nitric acid, at the time of its inoculation, and gave, in every instance, the reaction denoting the presence of albumen. Neither the absence of this fundamental element or of any others, nor their extreme dilution, can, therefore, be brought to explain the inactivity of the vaccinal serous fluid."

These experiments permit of the conclusion that the vaccinal serous fluid is not virulent, and that the activity of the vaccine exists in its solid bodies, either in all without distinction, or in one special portion of these small elementary organisms.

This inactivity of the vaccinal serous fluid, M. Chauveau states, constitutes a fact of great importance, not only with special regard to the theory of virulence, but also from the general point of view of the physiology of the elements.—*Half-Yearly Abstract.*

THERMOMETRICAL OBSERVATIONS IN TYPHOID FEVER.—Dr.

Thomson's observations (published in *St. George's Hospital Reports*, vol. ii.) extend over a period of three years, and are made from a careful study of 47 cases. They tend to confirm Professor Wunderlich's researches on the same subject. In typhoid fever, a decrease of temperature is not always a favorable sign, nor is a rapid fall symptomatic only of a crisis. As a rule, the nocturnal increase of temperature in this form of fever is very considerable, and amounts to two or two and a-half degrees. During the latter half of the first week, the heat increases day by day, and varies between 102° and 103° in the morning, and 104° or even 105° in the evening. These high temperatures are quite sufficient to distinguish typhoid fever from tubercular meningitis, or from peritonitis, these diseases seldom showing much increase over 102° Fahr. During the second week, the temperature varies between 102° in the morning, and 103° and 104° in the evening, the oscillations being influenced by the amount of diarrhoea. The thermometer does not enable one to say, by a longer prediction than 24 or 48 hours, whether the case is likely to be fatal or not; but a steady rise in the temperature will often indicate the danger of ulceration of the bowels 24 hours before the intestinal lesion is manifested by diarrhoea and hemorrhage. The mode of termination of the fever is characterized by extraordinary oscillations in the temperature between morning and evening, the difference being sometimes as great as nine degrees. This feature distinguishes the thermograph of typhoid fever from that of almost all other diseases. In one case of perforation of the bowels, which was preceded by hemorrhage, the heat of the body was reduced from 102° to $99^{\circ}.5$, and was followed by a rise to $102^{\circ}.2$, where it remained for 48 hours before death, during which period perforation took place.

The conclusions that the observations made with the thermometer in cases of typhoid fever lead Dr. Thompson to draw, are the following:

1. The thermometer points out a distinction between typhoid fever and some other diseases which often simulate it, *viz.*, acute granular kidney, meningitis, peritonitis.
2. The thermograph of typhoid differs from that of other fevers, and especially in the mode of favorable termination.
3. An additional distinction between typhoid and typhus fevers is thus given.
4. It is possible, by its use, to appreciate intestinal lesions before they are recognized by the ordinary symptoms.—*Half-Yearly Abstract.*

HEMORRHAGE FROM WAXY OR AMYLOID DEGENERATION.—For some years past, Dr. G. T. Stewart, of the Royal Infirmary, Edinburgh, has noticed that hemorrhage from the stomach and intestine occurs in cases of waxy or amyloid degeneration, and that independently of ulceration of the mucous membrane. He has thus been led to look into the literature of the subject, and inquire among professional friends as to their observations.

The conclusions, which seem warranted by the facts he has observed in connection with this subject, are—

1. That hemorrhage is not a very infrequent consequence of the waxy or amyloid degeneration of vessels.
2. That, next to the spleen, the intestinal tract is the most common seat of such hemorrhage.
3. That the hemorrhage occurs independently of any visible ulcerative process.
4. That it probably depends upon rupture of the capillaries at the affected parts.
5. That waxy or amyloid degeneration of the liver does not of itself suffice to induce hemorrhage from the bowels.
6. That the hemorrhage occurs in cases in which the liver is free from waxy degeneration.
7. That the occurrence of hemorrhage increases the danger of the patient. But,
8. That sometimes it comes and goes for years without markedly depressing the vital powers.

In regard to treatment, Dr. Stewart adds, so far as he has yet seen, the diarrhœa and hemorrhage appear to be better controlled by sedative and astringent enemata than by any other means.—*Ibid*

ALCOHOLIC RHEUMATISM.—About 30 years since, John Higginbottom, Esq., F.R.S., Nottingham, first noticed that a form of (so-called) rheumatism was cured by abstaining for some time from the use of fermented alcoholic fluids. He said at that time that the complaint should not be called rheumatism, but alcoholism, as *alcohol* produced the disease, and abstinence from *alcohol* was the remedy. Mr. Higginbottom maintains that:—

1. Alcoholic rheumatism is the result of a distinct cause.
2. It is produced by drinking fermented alcoholic beverages.
3. It is slow in effecting a marked visible change in the system.
4. It does not usually appear before middle life.
5. Its effects are produced by the accumulation of the fermented alcoholic fluids taken into the system.

6. It causes stupidity, stiffness in the body, hobbling gait, and ultimate lameness.

7. It causes changes of structure, producing chronic alcoholism.

8. The remedy is abstinence from the use of all fermented alcoholic drinks, and taking vigorous exercise in the open air. —*Ibid.*

A REMARKABLE CASE.—At the late session of the Massachusetts Medical Society, in Boston, Dr. John M. Harlow gave the history of a man named Gage, who, while blasting rocks at Cavendish, Vt., in 1847, had a tamping iron three feet seven inches long and one and a-quarter inch thick and tapering to a point, forced through his head, it entering the left cheek and coming out about the centre of the top of his head. Dr. Harlow, who attended the man, gave the daily symptoms of his patient and said that in 59 days he was able to walk and ride, and was soon nearly as well as before, although his intellect was somewhat affected. This is considered the most remarkable case of the recuperative powers of nature and has been doubted by many prominent surgeons. Gage died May 21, 1861, 12 years, 6 months and 8 days after the injury. Dr. Harlow procured his head and has presented the skull to the Warren museum of the Harvard Medical College. Dr. Bigelow said he saw Gage 20 years ago, and was then satisfied of the reality of this wonderful case. He also said, a tube of iron $\frac{3}{4}$ ths of an inch in diameter and about five feet long passed through a miner's head, while blasting coal in Ohio, and was pulled out by a fellow-miner. The injured man was introduced to the audience, and Dr. Jewett, the attendant physician, recounted the case in detail.

TRANSFUSION OF BLOOD.—A German medical journal gives the account of a case of poisoning by exposure to the vapors of burning charcoal, in which transfusion of blood, from the arm of a robust man, effected a satisfactory cure, after every other effort at restoration had failed and the patient was believed to be dead.

EPISTAXIS AND THE MEANS OF ARRESTING IT.—Dr. John Thompson (British Medical Journal—Canada Medical Journal) recommends the following simple and, in his hands, very successful treatment, as a substitute for the ordinary method of plugging the nares. A strip of lint as broad as the finger and

twice the length of the nasal passage, is folded over the "bowl end" of an ordinary director and introduced along the floor of the nostril until it reaches the throat. The director is then withdrawn, "giving it a wriggling movement, so as leave the lint rumpled and loosely distending the passage. The result is, that the blood rapidly permeates and distends the lint, a large coagulum is formed and the bleeding completely arrested."—*Humboldt Medical Archives.*

BELLEVUE HOSPITAL MEDICAL COLLEGE, CITY OF NEW YORK. SESSION OF 1868-'69.

FACULTY.

ISAAC E. TAYLOR, M.D., Emeritus Prof. of Obstetrics and Diseases of Women and Children, and President of the College.

JAMES R. WOOD, M.D., LL.D., Emeritus Prof. of Surgery.

FRANK H. HAMILTON, M.D., Prof. of Practice of Surgery with Operations.

LEWIS A. SAYRE, M.D., Prof. of Orthopedic Surgery.

ALEXANDER B. MOTT, M.D., Prof. of Surgical Anatomy with Operations.

W. H. VAN BUREN, M.D., Prof. of Principles of Surgery with Diseases of the Genito-Urinary System.

BENJAMIN W. MCCREADY, M.D., Prof. of Materia Medica and Therapeutics.

GEORGE T. ELLIOT, M.D., Prof. of Obstetrics and Diseases of Women and Children.

FORDYCE BARKER, M.D., Prof. of Obstetrics and Diseases of Women and Children.

STEPHEN SMITH, M.D., Prof. of Descriptive and Comparative Anatomy.

AUSTIN FLINT, M.D., Prof. of Principles and Practice of Medicine.

R. OGDEN DOREMUS, M.D., Prof. of Chemistry and Toxicology.

WILLIAM A. HAMMOND, M.D., Prof. of Diseases of the Mind and Nervous System.

AUSTIN FLINT, JR., M.D., Prof. of Physiology and Microscopy, and Secretary of the Faculty.

The Preliminary Term will open on Wednesday, September 16, 1868, and will continue until the opening of the Regular Session, October 14, 1868. A distinctive feature in the method of instruction in this College is the union of Clinical and Didactic Teaching, and all the Lectures are given within the Hospital Grounds.

FEES FOR THE REGULAR SESSION.

Fees for Tickets to all the Lectures during the Preliminary and Regular Term, including Clinical Lectures,-----	\$140 00
Matriculation Fee,-----	5 00
Demonstrator's Ticket (including material for dissection),-----	10 00
Graduation Fee,-----	30 00

For the Annual Circular and Catalogue, giving regulations for graduation and other information, address the Secretary of the College, Prof. AUSTIN FLINT, JR., Bellevue Hospital Medical College.

CHICAGO MEDICAL COLLEGE.

The regular Annual Lecture Term in this Institution will commence on the first Monday in October, and continue until the fourth Tuesday in March following. Clinical Lectures *daily* throughout the term.

FACULTY.

- N. S. DAVIS, M.D., PRES'T OF FACULTY, 166 State Street,
Professor of Principles and Practice of Medicine and of Clinical Medicine.
- W. H. BYFORD, M.D., TREAS. OF FACULTY, 62 State St.,
Professor of Obstetrics and Diseases of Women and Children.
- EDMUND ANDREWS, M.D., SEC'Y OF FACULTY,
81 Monroe Street,
Professor of Principles and Practice of Surgery and of Military Surgery.
- H. A. JOHNSON, M.D., 611 Wabash Avenue,
Professor of Diseases of Respiratory and Circulatory Organs.
- C. GILBERT WHEELER, B.S.,
Professor of Organic Chemistry and Toxicology.
- RALPH N. ISHAM, M.D., 47 Clark Street,
Professor of Surgical Anatomy and Operations of Surgery.
- J. H. HOLLISTER, M.D., 30 Washington Street,
Professor of General Pathology and Pathological Anatomy.
- THOMAS BEVAN, M.D., 81 Monroe Street,
Professor of Public Hygiene.
- R. J. PATTERSON, M.D.,
Professor of Medical Jurisprudence.
- J. S. JEWELL, M.D.,
Professor of Descriptive Anatomy.
- DANIEL T. NELSON, M.D., 169 Dearborn Street,
Professor of Physiology and Histology.
- M. O. HEYDOCK, M.D., 92 Dearborn Street,
Professor of Materia Medica and Therapeutics.
- C. GILBERT WHEELER, B.S.,
Professor of Inorganic Chemistry.
- E. O. F. ROLER, M.D., 62 State Street,
Adjunct Professor of Obstetrics.
- J. M. WOODWORTH, M.D., Lombard Block,
Demonstrator of Anatomy.
- S. A. McWILLIAMS, M.D., 166 State Street,
Assistant to Professor of Anatomy.
- JULIEN S. SHERMAN, M.D.,
Curator of the Museum.
- NORMAN BRIDGE, M.D.,
Assistant to the Demonstrator of Anatomy.

FEES.

For the Winter Term, admitting to all the Lectures in the College,	\$50.00
Graduation Fee,	20.00
Matriculation Fee,	5.00
Dissecting Ticket,	5.00
Hospital Ticket,	6.00

The Summer Reading and Clinical Term commences on the first Monday in April, and continues until the first Monday in July; and is free to all matriculated Students of the College. Boarding, \$3.50 to \$4.50 per week. For further information, address

E. ANDREWS, M.D., *Sec'y of the Faculty.*